

Historical Materialism 61

Time in Marx

The Categories of Time in Marx's Capital

Stavros Tombazos

BRILL

Time in Marx

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Time in Marx

The Categories of Time in Marx's *Capital*

By

Stavros Tombazos



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To Daniel Bensaïd, Georges Labica and Jean Marie Vincent

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Introduction to the English Edition

This book was written and published for the first time, in French, in quite a different social, political and economic environment. The writing of the book occurred between 1988 and 1991 (it was published in 1994). These were the times of the collapse of the Soviet Union and of the fall of the Berlin Wall, experienced and presented in the dominant media as the definitive triumph of capitalism.

The political and intellectual tradition to which I belong had never shared the illusions of other traditions on the left concerning the nature of the Stalinist régimes. However, history, being rarely fair, has not spared us. In that particular context it was very difficult to devote several years to an author who was 'definitively dead and buried'. And yet a deep conviction enabled me to pursue this work, even with the risk of seeing it, in the end, locked and forgotten in a drawer for an indeterminate length of time: Marx is not an author of the nineteenth century, nor did he primarily analyse English capitalism. More crucially he 'opened up' the commodity, the cellular form of modern wealth, in which he discovered a whole world which still to this day constitutes our social, material and intellectual universe. At the present time, some of Marx's books – in particular, *The Communist Manifesto* – sell more copies than the Bible. This is not entirely by chance: Marx's object has spread geographically and has been able to penetrate every aspect of life, even the most intimate.

This is why there was no doubt that, sooner or later, beyond the media-hype and imaginary 'ends' of history, Marx would reappear at the forefront of the public arena. In truth, he has never really been absent. He belongs to the kind of strange realities that are present even when they are absent. Marx is definitely part of what Jacques Derrida calls 'spectral reality', or simply 'spectrality':

If there is something like spectrality, there are reasons to doubt this reassuring order of presents and, especially, the border between the present, the actual or present reality of the present, and everything that can be opposed to it: absence, non-presence, non-effectivity, inactuality, virtuality, or even the simulacrum in general, and so forth. There is first of all the doubtful contemporaneity of the present to itself.¹

1. Derrida 1994, p. 39.

This essentially means that the other of the current or effective presence is not any other, an indifferent other that was possible not to mention, but rather *its* other, a determined absence, a present absence. How can the obsessions and phobias of our times – which despite so many conjurations of their spectres, continue to moan worryingly – be explained in a different manner?

This book not only went against the current with respect to the historical conjuncture at the time of its writing and publication, but also with respect to its relation to the dominant French interpretation of Marx's work in general and of *Capital* in particular. Whereas the dominant variant of French Marxism wanted to 'free' Marx from his 'Hegelian' legacy by highlighting the 'epistemological break' between the work of his youth and that of his maturity, this book 'discovered' in *Capital* a more 'Hegelian' Marx. The aim was not to deny the essential differences between the work of Marx's youth and that of his maturity, but to emphasise that *Capital's* 'science' was a 'German science' (to use an expression of Marx himself), namely, a science that does not oppose quality to quantity, universal to particular, essence to appearance, Notion to empirical reality, law to tendency, truth to error, philosophy to economics, the critique of political economy to political economy, necessity to chance and logic to history in the usual manner. The 'German science' demands above all that Hegelian dialectics be treated with the respect that it deserves. It also implies that notions such as fetishism, alienation, reification, false consciousness, and so on – notions without which the intelligibility of capitalist social relations is not possible – be approached with the utmost seriousness. Marx's merit is to have rehabilitated the 'obscure' and the 'mystical' as necessary moments of the comprehension of the social world, while at the same time integrating them in a rational and demystifying theory of the real.

This book is now published again, in English this time, in the context of the 'great capitalist crisis' that is here to stay. This is certainly not just a crisis of the deregulated financial system that has come to the brink of collapse. This is a crisis of the neo-liberal schemas of reproduction of capital that were progressively implemented since the beginning of the 1980s. This is, more specifically, a crisis of the 'toxic' capitalism that emanated from the neo-liberal endeavour to restore the rate of profit. In this sense, the current crisis is the crisis of the answers that were given to the crises of the 1970s. With the current crisis, the long wave of contraction that begun in the 1970s has deepened significantly, despite the considerable success of neo-liberalism to enforce social inequalities, which have never been as great as in our times. Capitalism is a social system that is capable of combining the most impressive developments in technology and instrumental knowledge with the most extreme social regressions. Alongside the threat of a natural disaster on an unprecedented scale, these factors constitute a veritable civilisational crisis.

In proposing an interpretation of crisis in Marx as an economic ‘arrhythmia’ caused by the contradictory articulation of the three fundamental rhythms of capital – the rhythms of (i) the valorisation of value, (ii) the reproduction of productive capital, and (iii) the realisation of the value of commodities – this book contributes to an understanding not only of the long wave of contraction, but also of its current phase, namely, the crisis unfolding since 2007: the crisis, for Marx, is not necessarily caused by a fall in the rate of profit, since the fall in the rate of profit can just as well be the *result* and not the cause of the crisis.

It is not by chance that the spectre of Marx has returned with a vengeance to the forefront of the public arena. Over and above its economic and social consequences, the crisis has also wreaked havoc in the sphere of language: the ‘free market’ has become ‘capitalism’ again, while ‘international relations’ are often called ‘imperialism’, and ‘social conflict’ sometimes becomes ‘class struggle’. Who dares speak today of the ‘capacity of the market to self-regulate itself to the benefit of society’, or to pretend that ‘privatisation’ necessarily renders public enterprises more efficient? The crisis has eliminated the plethora of euphemisms, observed since 1980, such as ‘modernisation’, ‘flexibility’, ‘adjustment policies’, ‘reforms’, and so on. Besides, there are no euphemisms for the unemployed, the poor, the homeless; there are no buzzwords for an entire humanity that is diminished, scorned and marginalised. And no longer is there any doubt that the real origin of profit through the speculation of the banks, investment funds and the virtuosos of all manner of the global casino economy is the sweat of daily labour.

This linguistic shift, like the smile of the spectre that accompanies it, runs the risk of proving ephemeral, for language and ideas are just as much objects of class struggle as surplus-value. The civilisational crisis of our disarticulated and centrifugal times has already inaugurated a new prolonged period of social struggle, the outcome of which cannot be predicted. In this context, the study of Marx’s work (*Capital* in particular) is indispensable. It does not enable us to predict the future, but it does enable us to better understand the nature of the crisis and to specify its course in order to more effectively partake in present and future struggles. Prospects at present may appear melancholic but the historic outcome is in no way decided.

In this edition, I have corrected the mistakes in the French edition with a few minor changes here and there. Worth mentioning is the reformulation of the chapter headed, ‘The Hegelian Theory of Measure and Value as “Essence”’.

I wish to warmly thank those who have helped me to write this book, and those who contributed to the discussions it has stimulated. In particular, I would like to thank Antoine Artous, David Broder, Sebastian Budgen, Pierre Cours-Salies, Daphnos Economou, Michel Husson, George Faraklas, Stathis Kouvelakis, Karin Meyer, Simon Mussell, Maria Petrou, Catherine Samary, Enzo Traverso, Kostas Vergopoulos and Christiana Voniati. I would also like to thank Christakis

Georgiou for the translation of this book into English, and for the excellent collaboration that we have had during its course.

This book is dedicated to Daniel Bensaïd (without whom this book would probably still be in a closed drawer), Georges Labica and Jean-Marie Vincent, three friends whom we have lost in the last few years. Over the last thirty years, their theoretical output has been a constant source of inspiration for me, and it remains so today. Without their contributions Marxism would be far poorer both in France and in the wider world. I wish to thank them for the help they so generously offered me, for their friendship and especially for having taught me that there is no remarkable theoretical work without this feeling of 'loyalty towards people unknown'.

– Stavros Tombazos (December 2010)

The Missile's Load

Georges Labica

I have heard people tell Stavros Tombazos that the theme of the 'end of Marxism' was an 'idle man's business'. Obviously, we all know that this is about something very different. But the thought is no less relevant. Let us declare the end of Kantianism or Hegelianism, and we will be able to spare ourselves the trouble of reading the *Critique of Pure Reason* or the *Science of Logic*. That will save so much time and effort in order to... write obituaries or attend funerals.

As for Tombazos, he has none of the traits of an idle man. Not only does he hold no fear of the main part of *Capital*, which the leaders of the First International could not assimilate and which modern dandies claim to have no need for, but he also holds that reading it remains essential for anyone who wants to gain an understanding of the world in which we live, how it works and how to change it. Tombazos's book provides proof of this claim. Despite the inherent difficulty of the subject matter, the book is written in a style that is both clear and rigorous, and which finds solid foundations in its author's dual capacity as a researcher who has read all prior works of importance and as a polyglot who has direct access to the text. The title could have been *Reading Capital*, had this title not already been used: reading the whole of *Capital*, with a scrupulous loyalty to the order of its reasons, just as Martial Guérault wished to do for Descartes's *Meditations*; (re-)establishing the coherence of its three volumes, its unity, that of 'a living organism', and its logic, which coincides with its history; its totality, which prevails over the rules of its becoming. 'The object of *Capital* is capital itself' – this is what needs to be admitted as a preliminary to the interpretations that detect its paradoxes or track down its internal contradictions.

The consideration of 'time' appears as the most adequate consideration with respect to this aim: a consideration of 'time', or rather of the successive times intersecting and over-determining each other. Linear temporality is that of production, while cyclical temporality is that of circulation. The two unite in the organic temporality peculiar to capital. The movement inherent in this threefold structuring of *Capital* and its restitution, to which Tombazos invites us, presupposes that, on the one hand, we take seriously the dialectical point of view, and,

on the other, we respect the Notion's requirements. The former requires that one places oneself in contradiction, with the aim of producing a contradictory (that is, non-arbitrary) unity and the 'dialectics of forms'; the latter, which subordinates to itself the distinction between essence and phenomenon, both of equal reality, establishes that 'capital is precisely a conceptual organisation of time'.

As a result, Hegel is less than ever before treated as a 'dead dog'. And let us be clear that this is absolutely not a new attempt at rehabilitation, crossing swords with those who denigrate the relation between Hegel and Marx. Both speak the language of the Notion. One will read with an interest that entirely renovates the classical approaches how capital corresponds to the three figures of Hegelian syllogism, that capital is nothing else than a 'social syllogism', and how capital is in line with the logic of the 'Idea', this bridge between Notion and reality, in other words, with the beginning of the third section of the second volume of the *Science of Logic* devoted to 'Life'. Moreover, it is the Hegelian theory of 'measure' which provides the best way of understanding the Marxist theory of value, to the extent that the latter is 'not a theory of economic equilibrium, but of non-equilibrium'. Consequently, Volume II of *Capital* – too often forgotten by those (the politicians) who start with Volume III, and those (the theoreticians – be they economists or philosophers) who do not go beyond Volume I – sees its function fully restored and reasserted.

The exposition of the theory of fetishism forms the core of Tombazos's work. I believe that out of all the literature dedicated to this issue, Tombazos's elucidation is the best. The complex relation between the processes of circulation and production is not simply approached through the metaphor of surface and foundation, 'founded appearance' or 'phenomenal form', where economic and juridical equality echo one another. This complex relation establishes a relation between cyclical time and the linear time of production, and, even more importantly, brings to the surface the fact that these two processes act in a mirror-like way. As such, they cannot be dissociated, since each one is one of the other's moments in the process of reproduction. The surplus-value thrown up in the process of production is legitimised in the process of circulation: 'it is nothing if the commodity is not sold'. This is why one has to point out (*pace* a certain Althusserianism) that the theory of fetishism is not at all dross, or against the theorists of the contract that they remain at the level of this 'surface', assuming individuals to be free and equal. Or against others still that *Capital* does not aim to oppose essence to appearance. The notions of reification and alienation leave the zone of ambiguity to which they are sometimes confined, so that their full theoretical weight can be released. The famous 'Trinity formula' of Volume III is nothing other than the end result of this problem, man's enslavement to his own social relations. However, one will regret here the absence of a positive appreciation of

Henri Lefebvre for never surrendering on this issue. The logic of capital – time subdued to its end-purpose – pronounces the ‘radical break between economic and social progress’.

Capital is, indeed, what Marx wanted it to be when he presented it as a critique of political economy carried out from ‘the point of view of the working class’, namely, a political book. Its lucidity is the foundation of and guide for struggle, for neither the capitalist mode of production nor the exploitation that it has rendered global – we know this even better than the book’s author – will perish from a heart attack. As Tombazos asserts in his conclusion, the fact that Marx remains a thinker of freedom, and – for our own time at least as much as his own –, a theorist of human rights, real and yet to be conquered, is an obvious fact that has to be perpetually shared with others. Such is the lesson of this book, which proves the actuality, that is to say, the relevance and the efficiency, of *Capital’s* analyses. So, let us follow the guide.

Rearguard Seasonals

Postface to the French edition by Daniel Bensaïd

This book by Stavros Tombazos is the first notebook of a series.

Season notebooks of which we will be the seasonals.

Seasons have their uncertainties, their whims, their irregularities. Although they turn up at appointments, they nonetheless challenge homogenous and empty time.

With these notebooks, we intend to work on our turn 'in the wretchedness of the present', not on a weekly or even a fortnightly basis but following an earthly rhythm, slow and heavy, keeping its distance from journalistic trivialities and the inconsistencies of current affairs, the polar opposite of the short news items that submerge the event.

These notebooks will be a free and variable form. Platform, collection of texts or thesis, neither book nor journal, sometimes the one and sometimes the other, sometimes short and sometimes long, according to the content and the urge behind them, as emancipated as possible from the dictatorship of the print run, their volume will vary so as to reconnect with the 'freedom of the institution'. A few hundred copies are enough to take a book out of the drawer and embark upon a patient and discreet adventure, far from superficial appearances, platform effects and demagogic hype.

Notebooks against the current? Out of tune, rather, with the morbidities of fashion. Rearguard notebooks? Why not? When the troops abandon the battle, when a demonstration dies down amidst an almost generalised renegacy, the situation enters into reverse and the vanguard, without having moved, covers the rear.

Join the rearguard that does not surrender.

When the weathervanes go mad in the swirling wind, there is no shame in covering the retreat. Blissful then are the tiny- and weak-minded, the tenacious and the obstinate, the unreconciled. To set aside the drums of the future, whence can spring forth an undreamed of possibility, one must first draw the line of the threshold of the unacceptable.

And know how to start all over again.

Revisit the badly learnt lessons.

Repeat and ruminate without ever confusing the dignity of defeats with the indignity of capitulations, the pride of the defeated with the humiliation of the beaten. We managed to sound the alarm on time and predict the disaster. It did not spare us for all that. None, who fought honestly for the communist ideal, will come out of the bureaucratic debacle intact. It is without a doubt unfair. But why should history be just and moral?

Under the weight of such an injustice, at least, the choice is stark: either join the procession of the victors and swell the booty or go into resistance and insubordination.

On the lookout for new experiences.

To give meaning again to lying words.

Being 'loyal to the event at which the victims have the word'.

Counter-revolution is never a revolution that has simply been overturned. It is its devious opposite, asymmetrical, drawn out at length. A restoration and conservation. It is always wrong to think that time toils patiently at the service of an ineluctable destiny. Time does nothing. It accompanies. It reproduces and perpetuates. It follows the slope of conservation.

The event is decided in its interruptions and intermittences.

This is why revolutions never happen on time.

Too early or too late. They are never really mature.

It is always an imprudent manner.

The blooming of this 'tardy impatience' that is suddenly set free.

But once the event has taken place, there is no blotting it out. 'Indeed, such a phenomenon in the history of humanity cannot be forgotten because it has revealed a disposition in human nature, such a capacity for progress that politics could not have, by dint of subtlety, eliminated the previous course of events: only nature and freedom united in humanity and following the internal principles of law were capable of announcing it, even if in an indeterminate manner and as a contingent event concerning its timing. But, although the aim of this event had not yet been reached today, when the revolution or the reform of the constitution of a people would finally have failed, or if, after a lapse of time, everything fell back into the previous rut (as some politicians now predict will happen), for all that this philosophical prophecy loses nothing of its power. For this event is too important, too intertwined with the interests of humanity and of too massive an importance for all the parts of the world, that it must be brought back to the memory of peoples at the occasion of favourable circumstances and recalled during the recommencement of new attempts of this kind'.

Written in 1795, during the Thermidor, these lines by Immanuel Kant on the French Revolution are still valid, word for word, for the October Revolution.

These settled times need modest memory smugglers. So that what, one day, made hope radiate is not forgotten. In order that texts, controversies, authors, thanks to which thought made its way through the scrub of myth are not abandoned to the fickleness of time.

The end of history has already reached its end.

Is there no longer a conflict driving history, no alternative to the established order? And yet, eternity does not exist, that of order no more than that of progress. The diminution of chance does not erase the ill-timed outbursts of events and, contrary to Cournot's predictions, the newspapers do not replace history. Either the multiple conflicts will tend towards an effective universality, or barbarism will triumph again in the fierce war of bell towers and chapels.

The end of ideologies has already reached its end.

Naturalisation of history, quantification of truth through public opinion, good sense badly shared in 'neither-norism', authoritarian circularity of the tautology, media de-politicisation and charitable crusades . . . ideology is functioning at full blast. The jargon of post-modernity is intoxicating itself with a deafening idle chatter. Religiosity is raising its head on the deserted pedestals of unburied gods. The overproduction of myth is in full swing. More and more myths are created, global from the outset, in a single day than they were during a century in the past.

The end of politics has already reached its end.

From its effacement behind the cold regulations of the economy, behind the egoistic calculations of game theory, or behind the drab communicational consensus. A politics without stakes gives rise to a representation without substance or legitimacy. One recalls then that democracies are as mortal as civilisations, and that the urgency of evil does not exempt one from willing the good.

'Barbarism is on the rise'.

And there is no great shining light towards which to orient yet.

And there is still no great business to which to hold on tightly.

Not that causes are missing. A citizenship that needs to be defended and reinvented. Solidarities that need to be recreated. The right to exist, to work, to health-care, to art and culture. But for the moment there is just an obscure and furious free-for-all, on the ground, without trumpets or glory.

The ungrateful moment of the negative.

No new promise, no foundational act, no culminating business. Only 'the wretchedness of the present'. With their everyday load of disavowals, renunciations and little concessions that make up the great capitulations. With wars that bear names coming from a different age, but are perfectly contemporary. Wars of today and tomorrow in which the new global hierarchies of domination and dependence are at stake.

At least we will have learnt, once and for all, that politics is not the realisation of philosophy. That there is no truth to be captured but only relations of truth, elusive and moving. The 'critique' thinks in the rhythm of this slow motion race. The politician does politics. There is enough room for two. As long as changing the world still means, in a sense, interpreting it.

We have observed the damage done by the profound merging of philosophy and politics (under the aegis of science) or of philosophy and science (under the aegis of politics). To ward off the danger, do we have to content ourselves from now on with an amiable division of the fields and places of knowledge? To this spatial metaphor, we will prefer a difference of time and rhythm. Theory, politics and the positivist sciences do not march at the same pace. Seasonal as they are, these notebooks will pass from a temporal register to a different one, from a theoretical or scientific patience to a political emergency.

Speaking of time and seasons, this text by Stavros Tombazos on the categories of time in *Capital* was a must. Many commentators stick to the general formula according to which every political economy is an economy of time, presupposing thus time as an 'already given' obvious fact.

Economising time means not only saving it, but first of all organising it. Far from functioning as an invariable referent, 'socially necessary' labour time is itself historicised, fluctuating and flexible, as a measuring instrument that varies together with the measured object.

Stavros Tombazos tackles this riddle. This ambitious enterprise implies both an interpretation of the coherence of *Capital* and an examination of its relation to Hegel's *Logic*. Research follows thus an original path, at the confines of philosophy and political economy, on the trail of this 'critique of political economy' that results not from positive science, but from this 'German science' that Marx, in a quest for a different way of 'making science', claimed to be his own.

Thanks to his knowledge of Aristotle, Hegel and Marx in the original, Stavros Tombazos (Hellenist and Germanist) accomplishes these tasks with rigour and skill, shedding light on the problems of value, the metamorphoses of the commodity, or the transformation of value into prices in light of the Hegelian theory of measure and syllogism. Labour time appears thus as the home of a diehard contradiction between the abstract and the concrete, duration and intensity. We are invited to go through the 'landscapes of these contradictions' where capital is manifested as a 'conceptual organisation of time'.

With the specific problem of time as his starting point, Stavros Tombazos sheds light on the general intelligibility of *Capital* and the originality of its own logic. Thus, thinking about the arrhythmias of crises 'requires much more from an additional analysis to that in terms of equilibrium'. It requires 'entirely different concepts, which cannot be expressed in mathematical terms and are

superior to those of the logic of identity'. A very frequent critique directed at Marx is that he remains tributary of the determinist epistemology of his time. This work draws our attention to an opposite tendency of his thought, ready to welcome the contemporary developments of fuzzy logic, chaos theory, the unity between chance and necessity.

The research presented in this book gave rise to a doctoral thesis. Unanimously appreciated, its wealth and rigour deserved something different from the forgetful somnolence of a drawer. In proposing it to the awakening of reading, these notebooks will fulfil one of their functions.

Translator's Note

The expression 'the time of production' is used to translate the French expression 'le temps de la production', which refers to the successive moments of the production process. Later in the book, the author uses the phrase 'le temps de production', which will be translated as 'production time'. This designates the time necessary to produce a commodity. The same distinction applies to the expressions 'the time of circulation' and 'circulation time'.

Introduction

Among the most precious resources from the intellectual legacy of the nineteenth century is Marx's work, and in particular *Capital*, which remains a relevant approach to economic and social reality. Since the crisis of the post-war model of accumulation, *Capital* has been one of the main sources of inspiration for a new generation of studies, whose object has mostly been the question of economic rhythms and crises. At the same time, reference to Marx is becoming more and more timid, hidden; as if economists had to excuse themselves for referring to Marx or for finding inspiration in him; as if it were necessary and obligatory to set themselves apart from Marx's theory of value, exploitation and capital.

A critical approach on the part of the economists (including Marxist economists) towards Marx's work is, naturally, entirely 'legitimate' and necessary. Unfortunately, the criticisms directed at him are too often below Marx's level. Contemporary economic thought is far from having exhausted the wealth of a theory that is periodically forgotten and then rediscovered, which is subjected to, as it were, the fluctuations of the profit rate, the nature and the intensity of social struggles.

It might seem, after so many commentaries and interpretations, that there is nothing more to be said about *Capital*, that there is room only for the repetition of trivialities. But appearances can be misleading. Paradoxically, after so many commentaries, discussions and criticisms, *Capital* remains underappreciated and enigmatic at both the economic and the philosophical level. It is very common, for example, to

criticise the contradictions of *Capital*, as if it went without saying that every contradiction exhibits, by definition and by nature, a lack of rigour in the analysis. And yet *Capital* has nothing in common with discourses of identity. It goes without saying, this is another misleading appearance, that on the issue of method Marx progressively abandoned the Hegelian method. And yet capital itself is nothing other than a 'social syllogism' coming straight from the *Science of Logic*. Its processes indicate an 'internal organisation', which is also that of the living 'organism' in Hegel. The first chapter of *Capital*, in particular on the forms of value, has given rise to an extensive literature, and has been admired as a masterpiece of dialectics, as well as condemned as 'metaphysical'. The forms of capital, on the other hand, whose analysis is developed in the first four chapters of Volume II, a real 'key' for understanding the whole of *Capital*, have attracted almost no attention, as if 'value' and 'capital' for Marx constituted two separate geometric spaces, two entities linked by purely external relations. A famous remark by Marx himself about his own method and its contrast with that of Hegel, namely, concerning the relation between the 'abstract' and the 'concrete',¹ which is endlessly quoted in order to highlight the opposition if not the 'incompatibility' of the two methods, provides a typical example of some of the most debatable criticisms Marx directed at Hegel: if one opens the sixth volume of Hegel's *History of Philosophy* at the chapter devoted to the philosophers of experience Bacon and Böhme, one finds that Hegel defines the relation between the 'abstract' and the 'concrete' in exactly the same way as Marx. Science, once it has been achieved, no longer starts from the 'empirical', and construction on the basis of the 'Idea' is a reconstruction.² And one could extend to infinity the list of the major paradoxes of the interpretations of *Capital*.

Today, the old disputes between idealism and materialism no longer attract anyone's interest. The dogmas have been buried and the orthodoxies are dead. It is time to discover new dimensions in Marx's work, to (re)discover the rigour of a discourse that seems to be leading a parallel life to that of its object. For Marx owes a good part of his fame to his research object, to the generalisation of the market relations he analysed and criticised. To be sure, the interest in his theoretical work suffers today from the repercussions of the failure of 'really existing

1. Marx 1973, pp. 100–9.

2. 'If the science is perfected the Idea must certainly issue forth of itself; science as such no longer commences from the empiric. But in order that this science may come into existence, we must have the progression from the individual and particular to the universal – an activity which is a reaction on the given material of empiricism in order to bring about its reconstruction. The demand of *a priori* knowledge, which seems to imply that the Idea should construct from itself, is thus a reconstruction only... In every science principles are commenced with; at the first these are the results of the particular, but if the science is completed they are made the beginning'; Hegel 1995b, p. 176. Georges Faraklas drew my attention to this point.

socialism' and the weakening of the labour movement in the West. But if the 'scientific' approaches to reality coincided with opinion, ideology or temporary moods, how could they be said to be useful, 'scientific'? Is there an approach to economic reality that is more 'global', more 'objective', 'richer', or, in short, closer to this reality than Marx's? The criticisms directed at Marx, even those that are interesting and useful – exceptions confirm the rule – do not propose alternative central 'concepts'. The trend is rather towards the opposite direction. One could do without, it is said, such concepts as 'value', 'capital', and so forth, meaning that many remarkable economists adopt an agnostic attitude on the issue of value, while recognising (paradoxically) the need for a holistic approach. And yet how can one understand a reality that always exists in its totality, without certain concepts that unite the moments of economic life? How can one, without 'value' or 'capital', resist the self-interested calculations of the commodity, its blind and partial realisms?

The object of *Capital* is capital itself. The latter appears as a conceptual totality, coherent, structured and displaying the characteristics of a process, for this totality contains the rules of its own becoming. In order to make this obvious we have chosen 'time' as the guiding thread of our analysis, for it lends itself admirably to the task.

Capital, like any other economy, is a specific organisation of time obeying its own immanent criteria. The categories of the three theoretical volumes of *Capital* fit differently in time. The categories of Volume I obey a linear and abstract temporality, homogeneous, a time that is supposed to be calculable, measurable. We call the latter 'the time of production'. The determinations of Volume II fit into a cyclical temporality. The various categories of 'the time of circulation' concern the turnover of value. Finally, Volume III is the volume of capital's 'organic time', the unity of the time of production and the time of circulation.

Capital starts with an analysis of the process of the simple circulation of capital to the extent that simple circulation constitutes a moment of the time of production. The commodity, as a historically completed determination and part of a living organism, which is capital, is in its immediate simplicity evidence of a labour time that is different from time as human experience. It is a 'real abstraction', a living notion, an autonomous social rationality that escapes conscious human control. This time manifests itself in money whose natural form is likely to represent it. In Volume I of *Capital*, it might seem that this abstract labour time is subjected to the language of quantity. In a certain way, abstract labour time is really subjected to the language of quantity, for the time of production and circulation have to be completed in order for one to be able to return to abstract labour time and grasp its implicit contradictions, which are present from the outset. The commodity is not a simple relation and even less so a thing, but rather is a complex and contradictory economic world. In the beginning

there is already the idea of the end. In the commodity there is already the idea of capital. Despite following the order of exposition of *Capital*, we have made an exception concerning value, and have made use of notions that fit in a temporality different to that of production. Value is not of the same order as quantity, for it escapes the established methods of measurement used by the so-called exact sciences. Socially necessary labour time is not a quantity but a 'link', a 'relation', a 'regulatory principle'. It can only be quantified through the effect of a difference that manifests itself in it. It contains a contradiction that has to be posited as such, a real and inherent contradiction to a non-equilibrium economy.

Simple circulation is a dialogue, the abstract dialogue between the commodity and money, the dialogue of value with itself. This dialogue leads to a 'negative' result. Simple circulation reveals itself as a dependent 'immediacy', as an incomplete relation that negates and conserves itself in relations of a higher order. Simple circulation is the immediate 'surface' of capital, the illusory and partial but 'objective' image that the latter gives of itself. It is inseparably both capital and its falsehood. But illusion and false appearance are not determinations that incidentally add themselves to the reality of social relations. They are the product and the result of the nature of value itself, of the essential moments of the system, every bit as much as surplus-value. This is why the presentation of the representation is as necessary as its critique. Simple circulation ends up, in spite of itself, attesting to the existence of a mysterious time hidden in the commodity, the time of surplus labour or surplus-value.

Thus, another part of the social drama begins – the productive process of capital in the strict sense of the term – where, amid the dust and the noise of machines, the invisible notions of productive rationality as a moment in the time of production are articulated: constant capital, variable capital, surplus-value, and so on. These notions are reserved not only for the process of the production of capital, but more precisely for the time of the production of capital. Fixed capital, for example, fits into the process of production no less than constant capital, with the difference being that the former pertains to the process of the turnover of value and belongs to the temporality of circulation.

In the first part of Volume II, in this true masterpiece of concision, the reader finds again the 'dialectics of capital' (the famous sub-chapter of the *Grundrisse*) in an infinitely more coherent and developed form than is to be found in the *Grundrisse*. Here, capital appears as the organic unity of three active 'syllogisms' or processes, each one of which constitutes the development and the critique of the others. It appears as a living totality of determinations, a complex articulation and interdependence of rhythms, which 'sums up' economic reality.

Nevertheless, this totality is situated at a high level of abstraction. In order to find a concrete expression, it first requires a series of notions belonging to the time of circulation: purchasing time, selling time, working period, production

period, turnover time, fixed and circulating capital, and so on. The time of circulation is a 'negative' time. It sets a limit to the cycles of valorisation of value, and at the same time is a particular moment of these cycles. Capital perpetuates and multiplies itself thanks to its cycles. Abstract labour time takes on new determinations which both transmit and criticise it.

Capital, the unity of production and circulation, is not simply the 'sum' of the determinations belonging to these two spheres. The links that unite them are internal and organic, conceptual. The organic time of capital is that point where the time of production and the time of circulation unite without becoming identical, producing in this way the concrete and stable, phenomenal, forms of capital: cost and price of production, wage and profit, interest and company profit, and so forth. The phenomenon is not, in Marx, 'inessential', but is, on the contrary, the form in which essence is manifested. Obviously, the phenomenal forms generate false appearances, illusions. But these illusions are not pseudo-realities. They are themselves phenomena requiring an explanation. There is in Marx what one could call the 'essentialisation of appearance': appearance is real. The nature of value hides itself behind prices and disguises itself as profit and wages, merging with the accidents of the market; in short, it lends itself an external enigmatic form, identical and at the same time non-identical to its internal nature.

The form in which value appears is not intelligible on account of an essence, but each one of these moments owes its intelligibility to the other. The language of essence or reflection is that of the splitting into two of the categories where the phenomena prove to be necessary to their explanation: without surplus-value, there is no profit, but without profit there is no surplus-value either. This is why the dualism of reflection, incapable of grasping its own *raison d'être*, comes up against the growing scepticism of the economists. The suspicion concerning notions such as value and surplus-value often expresses – unconsciously, it seems to us – a legitimate philosophical doubt. The solution, however, does not consist in the abandonment of notions that unify economic life; a solution which would lead sooner or later to a 'statistical' and empirical vision of social relations. Besides, the language of *Capital* is not the language of reflection, but rather the language of the Notion, a language which is situated beyond 'essence'.

Naturally, the distinction between 'essence' and 'phenomenon' is omnipresent in *Capital*, but it is also, at the same time, subject to the requirements of the Notion. This is why Marx would have been surprised by many criticisms directed at him, but which only marginally concern him.

Capital is, precisely, a *conceptual* organisation of time. It is neither a thing nor a simple social relation, but a living rationality, an active Notion, the 'immediate Idea' of the economy, as Hegel would probably put it, the 'abstraction *in actu*', as Marx writes on several occasions. Capital is the logic of its history. Between the abstract logical laws – immanent to the unfolding economic rationality – and

historical time, there exists no relation of separation, but a relation of reciprocal communication and impregnation. The former is realised in historically concrete forms, political and economic-institutional, which periodically go into crisis and evolve by leaps and bounds. Through the fluctuations of the profit rate and through crises, capital 'gives a rhythm' to history and directs it, orientates the trajectory followed without mechanically predetermining it, and diminishes chance without erasing it. History has nothing of a predetermined 'destiny'. The big crises are the moments in which the homogenous time of history is interrupted. They are the moments of probabilities and possibilities. Capital produces its concrete and particular contents and goes into conflict with them. The overcoming of these conflicts, always a possibility, more or less probable according to the situation, is the peace achieved between capital and itself, which secures for it a new period of growth.

Capital is the history of a progress in the material productive forces without an equivalent in previous economic forms. It is also the most radical separation between economic progress on the one hand (technology, scientific knowledge, and such like) and social progress on the other. The former is compatible with, if not inseparable from, periods of social regression, contempt and humiliation of humankind. It is a cog of uncontrollable mechanisms, or rather the carrier of an alien social organism. The 'laws of reason' and 'history' are not mediated by man's 'free will', but the objective 'reason' of the economy takes on the role of a hostile force standing in the way of the social individual. Social relations, now rendered autonomous and endowed with a will of their own, enslave man who is reduced to the role of the powerless spectator of a social becoming that both is and is not his own. Reduced to the abstraction of labour time, the worker is subjected to the self-organisation of capital's vital rhythms, the chronometers of production and the arrhythmias of crisis. Society is alien to the individual, and the individual is alien to himself.

Marx's 'science' not only claims to be as 'objective' as possible, but is also 'critical' and 'committed' to a cause. It is sufficiently strong to bear this commitment; far from hiding this fact, Marx's 'science' proclaims its commitment. There is no need to hide a certain 'point of view' or declared humanist principles, for these principles themselves lay a claim on universality. Marx criticises neither freedom, nor 'bourgeois' rights, nor even certain 'traditional values'; rather, he only criticises their hypocrisy and insufficiency.

Marx's and Hegel's language present their own difficulties, due in part to inevitability and the linguistic context of their time. We have striven to 'translate' them in a less enigmatic and more common language.

Part One

The Time of Production

Introduction

What is usually called 'value' is both a language and a logic. As a language, it is the Platonic dialogue between the commodity and money whereby the latter – the incarnation of the universal among the particulars – occupies the place of Socrates. As such, it is also a logic, that is, a set of links developed between the particular and the universal. Like every dialogue, that between the commodity and money entails not only 'communication' but also 'tension'. Value is a living language thanks to this 'tension' or 'contradiction'. The latter does not disappear when the commodities settle their scores. Thus, naturally, socially necessary labour time is contradictory. Paradoxically, Hegelian 'essence' is born out of a similar contradiction. By following the twists and turns of 'measure', we will see that this 'negativity' that is essence is a determination that is close to value; or, if one wants to put it this way, value is the free application of the concept of essence in economics. One might say that this is scandalous: essence is 'nothing' whereas value is 'labour'. However, it is Marx who says so: labour that shapes value differs from Falstaff's friend, in that one does not know from where to take it. Value, the objectivity of intersubjectivity, is both what links together labours that are executed independently from one another, and the movement of reorganisation of the social division of labour, so that its relation with a supposedly quantifiable labour is the relation of an insurmountable tension, real and internalised. What in the field of logic is 'nothing' can be the 'labour-value' in that of economics. Thus, by straying very slightly from Marx's text, we discover in his work the efficient and living notions of a non-equilibrium economics (first section).

The object of the first part of *Capital* is not a pre-capitalist commercial order, but instead a capitalism without capital, which is obviously contradictory. The reader comes up against the complex articulation of a logical and a historical time, two discourses where the one corrects the other by contradicting it. This part's object is the critical analysis of the simple circulation of capital, that is, of capital such as it appears in the blinding light of circulatory naivety. In the form of representation, simple circulation is the 'immediacy' of capital in that it designates an 'error'. Naturally, the exchange of equivalents, legal equality, and so forth, are neither pseudo-realities nor forms of pure representation, but are instead partial, unfinished and dependent 'truths'. The determinations of simple circulation appear for what they are when they become part of a superior relation that is capital, a relation, however, that 'negates' their original naivety. Thus, the relation C-M-C appears as a moment that is subject to the cycles of capital and, therefore, subordinated to the logic of the multiplication of value and not to that of the satisfaction of need. Economic inequality is added to legal equality. Moreover, it seems to us useful to show that simple circulation belongs to that category of logical phenomena Hegel calls 'chemical processes' (in the same way, moreover, that capital belongs to the category of 'Life') in order to highlight the conceptual character of the logic of *Capital* (second section).

Finally, leaving aside the reified time of production such as it appears in the commodity, money, simple circulation and commercial capital, we will concentrate our attention on the time of production such as it appears in the productive process of capital. Naturally, value does not reduce itself in this process to labour caught in its anthropological determinations, whether concrete or abstract. It is a teleological process that finds itself in a particular stage of its deployment, an 'internal end-purpose' that organises industrial life. The worker and the material elements of production, reduced to labour time past and present (constant capital, variable capital), become the organs of value as it produces, valorises and multiplies itself. Constant capital, variable capital, surplus-value, and so on – specifications of a linear and abstract time – prove themselves to be insufficient notions, unable to stand steady on their own feet. This is because capital, like every other living organism, cannot be grasped as an object composed of various parts linked to each other by externally complementary relations (third section).

Section One

The Commodity and Labour Time

Chapter One

Labour Time as a Transhistorical Economic Law

Neither labour nor labour time can be the starting point of the analysis of the capitalist mode of production. Labour time, its organisation and allocation in the various productive activities, appears in Marx as *the* ‘economic law’ in the most diverse of social formations.

On the basis of communal production, the determination of time remains, of course, essential. The less time the society requires to produce wheat, cattle etc., the more time it wins for the other production, material or mental. Just as in the case of an individual, the multiplicity of its development, its enjoyment and its activity depends on economization of time. *Economy of time, to this all economy ultimately reduces itself.* Society likewise has to distribute its time in a purposeful way, in order to achieve a production adequate to its overall needs; just as the individual has to distribute his time correctly in order to satisfy the various demands on his activity. Thus, economy of time, along with the planned distribution of labour time among the various branches of production, remains the first economic law on the basis of communal production. It becomes law, there, to an even higher degree.¹

The phrase in italics can (also) be translated as follows: ‘every economy is in the end an economy of time’, a translation that equally conforms to the original text.

1. Marx 1973, pp. 172–3.

It is obvious that 'economy' here means not merely 'saving', but rather 'organisation'. Every economic organisation is, therefore, an organisation of time.

In the fourth part of the first chapter of *Capital*, Marx notes that the patriarchal family allocates its labour time with the aim of producing its means of subsistence in convenient proportions and adapts this allocation to the natural conditions that vary with the changing of the seasons, and does so according to hierarchical relations based on differences in age, sex, and so on. He notes that in certain social formations, labour time is used as a metric standard of the earth. The ancient Germans, for example, calculated the amount of an arpent of earth on the basis of a day's work. This became incorporated into language: 'Tagwerk', 'Tagwanne', and so on. A similar phenomenon must have existed in France, as can be witnessed by the expression 'journal de terre'.²

If every economy is an economy of time, then each economy is a specific organisation of time. In one of his *Letters on Capital*, Marx writes the following:

That this necessity of distributing social labour in definite proportions cannot be done away with by the *particular form* of social production, but can only change the *form it assumes*, is self evident. No natural laws can be done away with. What can change, in changing historical circumstances, is the *form* in which these laws operate.³

The letter from which the above quotation is taken is the famous letter to Kugelmann of 11 July 1868, which is widely known for a very different reason. In this letter, Marx terms as 'idle chatter' the necessity to establish the foundation of the concept of value, since, according to him, 'every child knows' that no social formation can survive without working.

Should one conclude that the law of value is so obvious that it requires no solid foundations? This is what is implied by all the authors who quote these sentences without specifying their content. It is enough to remind them that the young Marx was not at all a proponent of labour-value.⁴ Marx himself, however, specifies the content of these polemical passages in the same letter: 'The science consists precisely in working out *how* the law of value operates. So that if one wanted at the very beginning to "explain" all the phenomena which apparently contradict that law, one would have to give the science *before* the science'.

It is thus childish and naïve to look for the foundations of value in the first pages of *Capital*. The law of value does not found itself immediately, but rather asserts, develops and justifies itself through the pages. Value has to show

2. Marx 1976a, p. 164, n. 28.

3. Marx 1934, p. 73.

4. See Mandel 1971. The title of the third chapter of this book is 'From rejection to acceptance of the labour theory of value'.

what it is, not in the first chapter of *Capital*, but in the whole of *Capital*, and its validity is measured by its results. Value is not only the starting-point of the analysis, but also the point of arrival.

Labour time is not necessarily 'value'. The fact that value is not simply labour time means that in order to 'develop the concept of capital',

it is necessary to begin not with labour but with value, and, precisely, with exchange value in an already developed movement of circulation. It is just as impossible to make the transition directly from labour to capital as it is to go from the different human races directly to the banker, or from nature to the steam engine.⁵

If the relation between labour time and exchange value or capital is similar to that between 'nature and the steam engine', then it is obvious we cannot abandon exchange value to common sense. Labour is not synonymous with value, nor is labour time synonymous with the quantity of value. They assume the value-*form* in a particular social system – the market system – where they possess specific contents and characteristics. This labour time and its phenomenal form are the object of the following chapter.

5. Marx 1973, p. 259.

Chapter Two

Abstract Labour Time: Form and Content

First of all, money appears in Marx as a particular commodity, which on account of its natural properties is likely to represent general labour time.

The necessary physical properties of the particular commodity, in which the money form of all other commodities is to be crystallised – in so far as they directly follow from the nature of exchange-value – are: unlimited divisibility, homogeneity of its parts and uniform quality of all units of the commodity. As the materialisation of universal labour-time it must be homogeneous and capable of expressing only quantitative differences.¹

The idea expressed in the above citation, taken from the *Contribution to the Critique of Political Economy*, can also be found in both the *Grundrisse* and *Capital*. Money is, for Marx, the ‘form of appearance of the value of commodities’.²

Marx was very interested in the natural properties of precious metals because he saw in them the characteristics of general labour time. In the *Grundrisse*, he notes that ‘the demands placed on the representing subject [money] are contained in the conditions – conceptual determinations, characteristic relations – of that which is to be represented’.³

1. Marx 1970, p. 49.

2. Marx 1976a, p. 184.

3. Marx 1973, pp. 173–4.

The idea that money is the 'representing subject' or 'symbol' of value was abandoned later on in the *Contribution to the Critique of Political Economy* and in *Capital*.⁴ Money represents abstract labour time, but does not symbolise it. This simply means that commodity-money must itself necessarily be value. If it symbolises, in a certain way, value, then it does so in the same way every other particular commodity does, namely, as an envelope of abstract labour. This line of argumentation is hardly convincing and seems quite irrelevant today. When inconvertible monetary signs enjoy the same degree of confidence as gold did previously, it becomes clear that money symbolises value in a different way to particular commodities. Moreover, in the manuscripts of Volume II of *Capital*, Marx seems to have revised his opinion on this question, since he speaks in those manuscripts of 'symbolic money', 'mere tokens of value which are specific to particular countries'.⁵

Labour time as it appears in money can only be the homogeneous and abstract time of the clock, whose parts (minutes, hours, days) are exactly identical. Individual labour time, however, does not seem at first to be reducible to this abstract time. Individual time has a particular content and each part of it is different. In short, it is a time that is experienced subjectively. It is in this specific sense that Marx writes the following lines in the *Grundrisse*:

Labour time itself exists as such only subjectively, only in the form of activity. In so far as it is exchangeable (itself a commodity) as such, it is defined and differentiated not only quantitatively but also qualitatively, and is by no means general, self-equivalent labour time; rather, labour time as subject corresponds as little to the general labour time which determines exchange values as the particular commodities and products correspond to it as object.⁶

What has just been said, however simple it might appear, is not entirely obvious. Certain passages in the *Contribution* especially seem to assert the opposite:

Labour-time is the living state of existence of labour, irrespective of its form, its content and its individual features; it is the quantitative aspect of labour as well as its inherent measure. The labour-time materialised in the use-values of commodities is both the substance that turns them into exchange-values and therefore into commodities, and the standard by which the precise magnitude of their value is measured.⁷

4. Marx 1976a, pp. 185–6. However, it must be highlighted that the idea that commodity-money must itself be value is not absent from the *Grundrisse*.

5. Marx 1978, p. 192.

6. Marx 1973, p. 171.

7. Marx 1970, p. 30.

The contradiction referred to in the above quotation is only apparent. The labour time referred to, here, is indeed 'the labour-time of an individual, but of an individual in no way different from the next individual'.⁸ Only by having recourse to this (real) abstraction can one speak of indifference as regards the individuality of the content and the form of labour, for labour's quantitative dimension does not erase its qualitative traits. Labour time is not pure quantity, a continual and regular 'out of itself' like that of the clock. That the worker's individuality is erased in the movement of production; that the experience of labour becomes an endless repetition of the identical; that, in short, the abstract character of labour (and of its immanent measure) is manifested as a 'practical truth' and an 'effective reality' [*Wirklichkeit*] corresponds to a specific stage of capitalist development. The meaning of the passage quoted above is made explicit a bit later:

Labour, thus measured by time, does not seem, indeed, to be the labour of different persons, but on the contrary the different working individuals seem to be mere organs of this labour.⁹

It is because of this reversal that 'different use values' are 'the result of individually different kinds of labour', whereas commodities 'as exchange values' represent 'homogenous labour, i.e. labour in which the individual characteristics of the workers are obliterated'.¹⁰

In the same text, when speaking of the commodity Marx notes that 'as it comes into being [it] is only materialised individual labour-time of a specific kind, and not *universal* labour-time'.¹¹

One does not, obviously, work twice – the first time specifically and concretely, the second generally and abstractly. It is the same time which is opposed to itself, to the extent that it both creates the use-value and determines the exchange-value, an opposition that also possesses quantitative dimensions. It is not enough to 'abstract' from the content of the particular labour time in order to determine the length of the general labour time. The quantitative passage from the one to the other does not present any particular conceptual difficulties if one assumes that complex labour is reducible to simple labour (which allows us to conceive the former as a multiple of the latter). Moreover, real labour time must be translated into a time of average intensity.

One can criticise Marx for having insufficiently analysed the laws governing the reduction of complex to simple labour, but one cannot deny that this reduction happens every day in the process of exchange.

8. Marx 1970, p. 32.

9. Marx 1970, p. 30.

10. Marx 1970, p. 29.

11. Marx 1970, p. 43.

What interests us at present is not the reduction of complex to simple labour, but the reduction of concrete to abstract labour. In other words, if 'labour time only exists as such subjectively', as asserted by Marx, then what is the content of general labour time?

The 'universal' or the 'general' has no other content, nor any other meaning, than that of being the negation of the 'particular'.¹² For example, 'animal' is a word that designates animals in general. It designates neither a cat nor a dog despite the fact that both cats and dogs are animals. However, in Marx, abstract/general labour time seems, as the quantum of a certain 'substance', to possess a specific content; it cannot be reduced to a simple universal.

In form II: 20 ells of cloth = 1 piece of clothing or = u coffee or = v tea or = x iron, etc. In this form cloth displays its expression of relative value and can be related to each singular commodity: piece of clothing, coffee, etc. as to a particular equivalent, and can be related to all the commodities as to the circle of its equivalent particular forms. Compared with this cloth, no singular type of commodity counts as its simple equivalent, as is the case of the singular equivalent; there are only for the time being particular equivalents, i.e. one equivalent excludes the other. In form III, which is the only inverted form and which is therefore contained in the latter, the cloth appears on the contrary as the generic form of the equivalent for all the other commodities. It is as if, next to and apart from lions, tigers, hares and all the other real animals that constitute the different races, species, sub-species, families, etc., of the animal kingdom, there existed moreover the animal, the individual embodiment of the entire animal kingdom. Such a singular reality, which comprises in itself all the really existing species of the same thing, is a general reality, as for example animal, God, etc.¹³

12. The relation between the particular and the universal that Henri Denis developed in his 1984 book *Logique hégélienne et systèmes économiques* seems satisfactory: 'In common sense, and also in particular sciences (biology for example), there exists a positive definition of the dog. But if we ask for this definition to be made more specific, what answer are we going to get? The traits belonging to dogs will be accumulated in front of us; and we will be told that the dog is the animal that possesses all of these traits at the same time: it has four legs, two ears, etc. Or, every particular dog possesses these characteristics and moreover certain particular traits that only belong to it. There are no two leaves on a tree that are exactly the same, nor even in all the trees of the same species on the surface of the earth. As a result, attempting to enumerate the traits that are common to all dogs, with the aim of defining what a dog is, obviously amounts to excluding or negating the particular dogs. The universal is truly the negation of the particular'; Denis 1984, p. 86. The relation between the dog and particular dogs is the same as the relation between the animal and particular animals. The relation between the universal and the particular also applies to names: 'The "Paul Durant" who works at the factory is quite different from the one who exercises: the former is sad, the latter is cheerful, etc. Nonetheless, one designates them both by the same name'; *ibid.*

13. Marx 1966, p. 234.

Money, the cloth of form III (or the gold of form IV) is thus not a simple universal, but a universal/singular, a concrete universality or a 'universal individual'. This idea, taken from one of the versions of the first chapter of 1867's *Capital*, is also developed in the *Grundrisse*, as well as in the *Contribution*:

All commodities are compared in the exchange process with the one excluded commodity which is regarded as commodity in general, *the commodity*, the embodiment of universal labour-time in a particular use-value. They are therefore as *particular* commodities opposed to one particular commodity considered as being the *universal* commodity.¹⁴

In other words, the universal commodity is a particular commodity like all the others, while at the same time being different from all the others. It is exclusive by virtue of its function in the processes of exchange, but it is also singular because it is the only one that is assigned the task of embodying universality.

Money in Marx plays a role similar to that played by Socrates in Plato's dialogues. Socrates is not simply an empirical singularity, a particular man among others. Through the lack of any contingency in his character and intellectual superiority and such like, he is: reason when compared with particular ways of reasoning; ethics when compared with particular moral values; and the embodiment of the universal among the particulars or the universal individual.¹⁵

It is necessary at this point to identify the link between these discussions on money and value. From the subjective perspective of economic agents, especially the sellers, it is as if general/abstract labour time existed next to and outside of particular/concrete labour time. This is a specific characteristic of market economies.

Contrary to what some analysts of Marx believe, abstract/general labour as value cannot be reduced to a simple productive consumption of 'brain', 'muscles', 'nerves', and so on, during a determined period of time. This physiological reality of labour is not a characteristic of market societies, but rather an anthropological truth. However, what distinguishes market societies from all other social formations is precisely the fact that abstract labour and its quantity cease to be a simple physiological reality.

Abstract/general labour as value is not reducible in Marx to the 'type' of concrete/particular labours. The former does not confront the latter in the same way that man confronts 'Paul Durant' or 'Jim Smith'.

How can abstract/general labour time be 'next to and outside of' particular/concrete labour time? What is the meaning of this expression? First of all, it

14. Marx 1970, p. 48.

15. As also noted by Fleischmann, Socrates is also an illustration of Hegel's singular Notion such as it appears in the second volume of the *Science of Logic*; see Fleischmann 1968, p. 245.

means that abstract/general labour time or value is a sort of 'foreign language' into which productive activities must be translated so that they may circulate:

Language does not transform ideas, so that the peculiarity of ideas is dissolved and their social character runs alongside them as a separate entity, like prices alongside commodities. . . . Ideas which have first to be translated out of their mother tongue into a foreign language in order to circulate, in order to become exchangeable, offer a somewhat better analogy; but the analogy then lies not in language, but in the foreignness of language.¹⁶

Therefore, next to the language of the producers there exists another language that is foreign to them and which has its own logic and rules. Particular labours must be translatable and translated into abstract/general labour. The translation process is nothing other than the exchange process. The latter is the Platonic dialogue of the capitalist economy. Every particular argument in these dialogues claims to be universal, but only Socrates's critique 'validates' the truly universal elements in the particular arguments.

Commodities come out of the sphere of production in the form of utility objects, next to which there is a price. This price is the manifestation, the externalisation of abstract labour time lying within the particular commodities. This labour time is not yet an object, it only exists as an idea; not as an object in the pocket of the producer, but as a quantity of money, as an idea in the producer's consciousness. General labour time can only be objectified in the exchange process where the commodity must pass from its immediate to its mediated being: in this process, it becomes money, the universal commodity.

In the exchange process, men compare their private labours, and in this way compare themselves to one another. They do so in an indirect way, namely, by comparing the products of their labours as values and as quantities of values, as abstract labour and as abstract labour time. Each producer produces for himself by producing for the others, and he is therefore dependent on the latter. Consequently, producers produce independently of their own needs. Each one of them produces a use-value, but a use-value for others. The result is the universal dependency of producers in a production system where nobody produces for his own needs. These needs, for want of being measurable, are estimated. As a consequence, a regulatory principle must intervene between the producer and the consumer, the seller and the buyer; there must be a mediation between these extremes. This regulatory principle, the 'mediator' and 'mediation' between the 'extremes',¹⁷ is their social relation, a relation which imposes itself on individuals as inevitable and which thus appears as a domineering abstraction, as

16. Marx 1973, pp. 162–3.

17. The expression is Marx's; see Marx 1973, p. 331.

autonomous and independent. This is why in market societies 'the process of production has mastery over man, instead of the opposite'.¹⁸

The mediator referred to, here, is not money, but rather socially necessary labour time. Commodities substitute themselves for one another in the exchange process according to this autonomous regulatory principle that while remaining conceptually identical to itself, varies quantitatively. By determining the proportions in which commodities exchange, abstract social labour time constantly reorganises the social division of labour. It follows that 'the social relations between their [the producers'] private labours appear as what they are, i.e. they do not appear as direct social relations between persons in their work, but rather as material [*dinglich*] relations between persons and social relations between things'.¹⁹

Money exists, as it were, in a perceptible way next to and outside of the particular commodities. Socially necessary labour time, which determines exchange-values, is necessarily linked to the various use-values that serve as its carrier. This splitting into two of the commodity – into commodity and money – refers, however, to a deeper reality. It refers to an autonomisation of social relations, to the 'birth' of a new rationality. Abstract labour time, or value, is this *Fremdheit* [strangeness], an autonomous and independent social relation that imposes itself on individuals as a natural law. It has no other content.

Exchange-value is a social relation facing individuals, assuming the semblance of a natural condition. The direct consequence of this reality is that social relations appear as social relations between things. 'The reciprocal and all-sided dependence of individuals who are indifferent to one another forms their social connection. This social bond is expressed in *exchange value*'.

The social character of activity... appear[s] as something alien and objective, confronting the individuals, not as their relation to one another, but as their subordination to relations which subsist independently of them and which arise out of collisions between mutually indifferent individuals... In exchange value, the social connection between persons is transformed into a social relation between things; personal capacity into objective wealth.²⁰

We wanted to specify the content of general/abstract labour time, and this led us to the discussion about the fetishism of the commodity. This did not happen by chance. There is nothing more fallacious than to consider the passages devoted by Marx to this issue as unnecessary, simply complementary or even superfluous and embarrassing, as some Marxists believe them to be. Value is inseparable from this modern 'religion' commonly called 'fetishism'.

18. Marx 1976a, p. 175.

19. Marx 1976a, p. 166.

20. Marx 1973, p. 157.

'The fetish character of the commodity' is not a false reality even though it is at the origin of 'false consciousness'. The fact that social relations become autonomous and dominate individuals is in the nature of the capitalist mode of production. It is its foundation. That this mode constantly reproduces the ideological representations [*Vorstellungen*] of individuals is a fact amalgamated with the social relations corresponding to this mode of production. This is, above all else, why these social relations appear to be as unchanging and eternal as the laws of nature. Marx is not a chemist. He is a philosopher and an economist. His 'object' is not a perceptible and material object, but is instead social reality, and, more specifically, capitalist society and the social relations of material dependence corresponding to it. The way individuals represent their social relations to themselves forms part of such relations and cannot be examined independently. These representations are not external to the 'real object'.

The relation between exchange-value and fetishism was developed in the *Contribution* and in the *Grundrisse*, but *Capital* is the place where this relation is presented in the clearest and most consistent way:

The value character of the products of labour becomes firmly established only when they act as magnitudes of value. These magnitudes vary continually, independently of the will, foreknowledge and actions of the exchangers. Their own movement within society has for them the form of a movement made by things, and these things, far from being under their control, in fact control them. The production of commodities must be fully developed before the scientific conviction emerges, from experience itself, that all the different kinds of private labour (which are carried on independently of each other, and yet, as spontaneously developed branches of the social division of labour, are in a situation of all-round dependence on each other) are continually being reduced to the quantitative proportions in which society requires them. The reason for this reduction is that in the midst of the accidental and ever-fluctuating exchange relations between the products, the labour-time socially necessary to produce them asserts itself as a regulative law of nature. In the same way, the law of gravity asserts itself when a person's house collapses on top of him.²¹

In this passage there are more ideas than there are words. Abstract labour is not reduced here to the socially necessary labour time present in the particular commodities, but rather appears as an autonomous subject whose producers are none other than its own partial and diverse activities, its particular expressions. This is a subject that auto-reproduces and auto-develops, like a real living social organism.

21. Marx 1976a, pp. 167–8.

Indeed, it is commonplace to present general/abstract labour time or value as an autonomous social relation, or to say that fetishism is the direct result of this relation, as we have done. However, by taking these simple observations as our starting-point we can best understand some of Marx's formulations (which have embarrassed some of his commentators) and better specify their content.

Louis Althusser, for example, wonders 'in what way can "use value", which is called "bearer – *Träger*" of "value", be considered to be contradictory to the value that it "bears"'. He comes to the conclusion that this is a 'mystery'.²²

This conclusion seems to us incorrect. There is nothing mysterious in Marx's expression. What could the commodity be if not the unity of opposites? It could only be what remains, and in fact there remains nothing of its specificity. The commodity would be a social use-value whose production would cost society a given amount of labour time. Its particular character set aside, the commodity's value would be this given amount of labour time. Thus, this value would only be value due to an abuse of vocabulary, for it would not differ from the 'values' of the patriarchal family or the *corvées* of the middle ages.

The commodity distinguishes itself from the latter, one could say, by the fact that it is produced in order to be exchanged. But is the exchange of the products of labour a specific characteristic of the market order? Of course not. The blacksmith in the Indian communities did not eat what he produced himself. What distinguishes the exchange of commodities from exchange in general is that the former is mediated by value that, in money, is posited as an external thing to the particular commodities. The universal does not exist without the particular, of which it is the negation, and yet, here it is in money, in flesh and bones, embodying the general against the particular interest, the social against the private and individual interest, exchange-value against use-value.

Let us examine more closely the contradiction of the commodity. It is linked to the problem of value. This contradiction possesses, first of all, a technical dimension:

For example commodities as use-values are not divisible at will, a property which as exchange-values they should possess. Or it may happen that the commodity belonging to A may be use-value required by B; whereas B's commodity may not have any use-value for A. Or the commodity-owners may need each other's commodities but these cannot be divided and their relative exchange-values are different.²³

22. See Althusser's 'Avant-propos', in Duménil 1978, p. 14.

23. Marx 1970, p. 51.

The natural characteristics of the commodity contradict therefore 'its general characteristic as exchange value'.²⁴

Nonetheless, the contradiction between use-value and exchange-value cannot simply be limited to the technical difficulties of direct barter.²⁵ It is obvious that these difficulties could be overcome through the issuing of purely symbolic notes or 'hourly labour vouchers'. Moreover, Marx's polemic against Proudhon, and all those who thought they could avoid capitalist crises by introducing labour vouchers, is quite well known.²⁶

The conflictual relation between use-value and value has,²⁷ essentially, to do with a conflict of temporalities: abstract/general labour time does not exist without concrete/particular labour time. The same time that determines values produces use-values, the former being the objective and abstract expression of a subjective and concrete labour time. However, general labour time, the 'mediator' between the extremes, does not correspond to the abstract identity $A=A$.

Market value [Marx uses here this expression as the equivalent of prices] equates itself with real value by means of its constant oscillations, never by means of an equation with real value as if the latter were a third party, but rather by means of constant non-equation of itself (as Hegel would say, not by way of abstract identity, but by constant negation of the negation, i.e. of itself as negation of real value).²⁸

The 'beauty of the value-form' consists, therefore, in the fact that it is the product of a constant negation of the negation. There is much more than just 'jargon' in this expression. Besides, according to Marx himself, 'ideas do not exist next to language in the way prices do next to commodities'. That value is the product of a double negation is neither external nor complementary to its Notion.

General labour time or value refers both to the time devoted to the production of a use-value, and to the time offered in the form of an equivalent aimed at the appropriation of this use-value. Value, therefore, is the link or the interaction

24. Marx 1973, p. 151.

25. It is a merit of the Althusserian reading of *Capital* to have considered the contradiction of the commodity as a problem. This contradiction cannot reside in the difficulties of direct barter. However, this contradiction has absolutely nothing in common with a 'flirt' or a 'coquetry', which, ultimately, amounts to dealing with this problem by simply eliminating it.

26. See Marx 1956; Marx 1973, pp. 115–238.

27. Furthermore, this relation implies that general/abstract labour should not be reduced to the type of particular/concrete labours. Aristotle writes: 'Substances never have contraries. How could first substances have them – this man, for example, that animal? Nothing is contrary to them. And species and genus have none'; Aristotle 1938, p. 31.

28. Marx 1973, p. 137.

between these two times. This reading of *Capital* can appear quite 'heretical'. However, it corresponds not only to the spirit but also the actual text of *Capital*.

In his letter to Kugelmann of 11 July 1868, Marx highlights that 'the form in which this proportional division of labour operates, in a state of society where the interconnection of social labour is manifested in the *private exchange* of the individual products of labour, is precisely the *exchange value* of these products'.²⁹ This means that the connection of various productive activities results from the confrontation taking place in the exchange process, and value is this confrontation.

Marx's entire polemic against the supporters of the theory of the 'labour vouchers' can be summed up in one sentence: if value can be divided into value and price (according to the terminology of *Capital*, Marx would have probably used the terms value and exchange-value), the same labour time should appear as both equal and unequal to itself, and on the basis of labour vouchers this is impossible.

As a result, the role of the concept of general/abstract labour time is not simply to be the common element of commodities, but also a 'third thing which confronts them both', a quality that is both 'inherent' and that 'exists outside them'.³⁰

What many of Marx's analysts highlight and recall from the first chapter of *Capital* is the principle of commensurability. The quantitative comparison of two qualitatively different things presupposes their reduction to a common quality. Their commentaries fail to recognise that commensurability solves the problems it raises in a complex and oblique way.

As soon as general/abstract labour time ceases to be a simple anthropological truth in order to become a social relation, it takes on the money-form, a form suitable to its concept, in order to confront the particular commodities and to contradict their unconditional exchangeability.

Value enters into contradiction with use-value because the former, in its immediate simplicity, refers to the time offered by society, in the form of money, in order to appropriate the use-value, whereas the latter refers to the labour time spent for its production in the private conditions of production. The commodity is the unity of use-value and value, but through the exchange process the equivalent (money) embodies value against use-value. This contradiction is manifested or becomes externalised as a constant redistribution of social labour time in the various productive activities. And this is, indeed, a contradiction because instead of distributing their labour time according to their needs, individuals 'confront' their commodities on the market in order subsequently to reorganise

29. Marx 1934, pp. 73–4.

30. Marx 1973, p. 151.

the division of their social labour according to the intensity of the shock produced in this way.

In this way, are we equating value with money, particular commodities to their use-values? Certainly not. The next chapter will demonstrate why this is not the case.

The contradictory relation between use-value and value appears in a very striking way amid the capitalist crises of overproduction that are its violent expression.

Lenin was perhaps not so wrong to note the following:

[I]n his *Capital*, Marx first analyses the simplest, most ordinary and fundamental, most common and everyday *relation* of bourgeois (commodity) society, ... the exchange of commodities. In this very simple phenomenon...analysis reveals *all* the contradictions (or the germs of *all* the contradictions) of modern society. The subsequent exposition shows us the development (*both growth and movement*) of these contradictions and of this society in the Σ of its individual parts, from its beginning to its end.³¹

With the exception of the expression 'to its end', Lenin's remark seems to us perfectly correct.

* * *

We can now further specify the real meaning of the concept of 'abstract labour time', at the risk of seemingly moving away from Marx's method such as it appears in the first volume of *Capital*, especially in its first chapters. However, this is simply a clarification and an anticipation of what remains implicit in these chapters.³²

We have successively shown that abstract labour time is different from time as it is experienced in life, that it cannot be reduced either to the type or the physiological reality of labour, and that it is not external to the contradiction of the commodity, but is instead inherent to it. Positively, it has revealed to us the following of its secrets: it is a social relation that dominates agents instead of being dominated by them, and it contains a contradiction, for it is both an inherent and an external quality of particular commodities.

Our analysis started from the point of view of the market producers or the commodity. We now need to look at things from the point of view of labour.

Abstract labour as a universality is first of all a negativity. It is not a perceptible reality. Abstract labour as a universality goes beyond all partial acts of

31. Lenin 1961, pp. 358–9.

32. The reader can, if he or she so wishes, skip this chapter and return to it at the end. The discussions that follow do not influence the logical continuity of the present study.

labour and embraces them. It is the 'absolute' abstraction that sets us free from all concrete or partial images of labour, a sort of catharsis of individual empirical consciousness. This 'purification' of consciousness, this high level of abstraction, is necessary, for it is only thus that we will understand the way in which '(abstract) labour... does not seem, indeed, to be the labour of different persons, but on the contrary the different working individuals seem to be mere organs of this labour'.

These lines must be taken literally. Labour, in capitalist conditions of production, is not the labour of different subjects, but, conversely, labour is the subject, and individuals (particular productive activities, and so on) are simply its organs. This means that abstract labour is not the abstraction of the concrete character of different labours, but an abstract and fundamental activity. This is why Marx speaks of a real abstraction. This simply means that 'one' does not set aside the specific character of concrete labours, but that labour itself can be known in the form of a unity. Contrary to every other mode of production, in capitalism everything happens as if labour understood itself as a subject, as if it existed in the way the 'ego' of consciousness exists.

Abstract labour as universality, as subject, is, at this level of abstraction, only an example of formalism. Abstract labour is a totality that rests on its own limits, confined within itself. It is indifference. It is this totality, however, that immediately produces a differentiation, for to what else is abstract labour 'indifferent' if not the partial acts of labour? Thus, abstract labour introduces a division within itself that is usually called the 'division of labour'. As simple indifference, it is universal, essence, pure negativity. As a differentiation of this indifference, and to the extent that it divides itself into abstract and concrete labour, it is particular. Particular labour corresponds to the particular productive activities and also to the particular use-values that constitute reified abstract/concrete labour. These are, so to speak, the various expressions of the 'ego' mentioned above.

In the usual way of reading *Capital*, the commodity divides itself into abstract and concrete labour, in value and use-value, without being able to be value if it is not also use-value, and vice versa. This is correct but insufficient. Abstract labour divides itself, within itself, into abstract labour (universality) and abstract/concrete labour (particularity). Use-value is not only an aspect of the commodity, but also an aspect of value, a particularisation of it. It is obvious that use-values, a natural form, can have no theoretical status in capitalism independently of value. For whom would it be, in this case, use-value? Except, of course, if one understands by this term a product that is not destined to be sold. But in what way would such a product be relevant to capitalism? Use-values in general can exist without value, except that in this case use-values are situated beyond the object that interests us. Use-values can only have a meaning as particularisations

of value, that is, as particular commodities, particular productive activities, and so forth; in short, as particularisations of human labour in general or specific ramifications of social labour. Each particularisation is not irrevocable but always provisional, for it is constantly subjected to monetary critique. It seems to us more correct to say that the commodity is divided into value and value/use-value in order to highlight the non-independent (and neutral) character of use-values under capitalism.

Thus, abstract labour appears in two forms: as a simple unity with itself (value, universality) and as a 'composed' unity (value/use-value, abstract/concrete labour, particularity). Obviously, it cannot be the former without being the latter. Is it by chance that the commodity (constant capital, and so on) is divided in Marx into value and use-value and not into value and 'utility'? Probably not. Thus, the usual vocabulary serves the purpose of abbreviation.

As we have seen, the universal commodity, or money, is a universal concrete, since it is the embodiment of the universal among the particulars. In Hegelian terms, it can also be called 'universal individual' (or non-empirical). It designates the moment of unity between the universal and particular aspects of abstract labour, of value and use-value. It is their fusion: the use-value of money consists in its universal and unconditional exchangeability.

In Marx, money as the critique of abstract/concrete labours is the co-ordinating centre of the various productive activities. It is the moment of the purification of the subject/labour from all unfit 'substances' that would prevent it from freely developing. It is the elimination of all expressions of labour with which labour can no longer identify, its auto-conservation. It is the moment of its auto-reflection in the same way that ancient thought considers and purifies itself, clarifies and develops itself thanks to Socrates's critique.

This 'reading' of abstract labour is a retrospective one. It is based on Marx's discussions that follow the first chapters of *Capital*. It is necessary to have first studied the three theoretical books of *Capital* in order to revisit the beginning and see what is still undeveloped at that point. Abstract labour as value is conceived as a universality, particularity and singularity, and it cannot be one of its determinations without also being the others. This reading unites instead of separates the moments of economic life, for each moment comprises the whole totality without eliminating the formal differences. We believe that such a reading is compatible with Marx's spirit and in no way constitutes a 'novelty' with respect to the author of *Capital*.

It is also necessary to note that our mode of exposition is purely logical. Obviously, it is not abstract labour as a universality that introduces a division within itself (as we have noted), for the universal only logically precedes the particular. It is human economic-historical behaviour that creates social relations. Their

'decoding' in economics necessarily follows a purely logical order, for the economist is presented with a complete object that has to be logically reconstituted. The issue of how or why this object is completed at a certain historical moment is of no concern to the economist, but it is crucial for the philosopher of history.

Abstract labour conceived in this way is nothing other than an initial and abstract approximation of social capital. Abstract labour, contrary to appearances, only precedes capital logically, not historically, while abstract labour is real and existent only as capital.

Chapter Three

Socially Necessary Labour Time

In der Vorstellung ist Raum und Zeit weit auseinander, da haben wir Raum und dann auch Zeit; dieses 'Auch' bekämpft die Philosophie.

Space and time are generally taken to be poles apart: space is there, and then we also have time. Philosophy calls this 'also' in question.¹

One aspect of the contradictory nature of the commodity is that value can only be determined quantitatively through the after-effect of a difference that appears within it. Socially necessary labour time is the quantitative determination of general/abstract labour, and, as we shall see, its definition is contradictory.

Marx is fully aware of the fact that he is proposing a contradictory definition of social labour time. In the first chapter of the first volume of *Capital*, he implicitly refers to the contradiction without attaching to it the importance it deserves. Why? Quite simply, because it is impossible to explicitly discuss it without mentioning notions such as surplus-value/profit, necessary labour time (for the reproduction of labour-power), wage, turnover time, and so on. Marx explicitly deals with this contradiction in the tenth chapter of the third volume of *Capital*, entitled 'Equalization of the General Rate of Profit through Competition. Market Prices and Market Values. Surplus Profit'.

1. Hegel 1970j, Volume 1, p. 229.

Let us begin with the first chapter of Volume I:

The value of a commodity would therefore remain constant, if the labour-time required for its production also remained constant. But the latter changes with every variation in the productivity of labour. This is determined by a wide range of circumstances; it is determined amongst other things by the workers' average degree of skill, the level of development of science and its technological application, the social organization of the process of production, the extent and effectiveness of the means of production, and the conditions found in the natural environment.²

For the sake of simplification, we call this definition of socially necessary labour Marx's technological definition. Social labour time depends on the productive power of labour that is its mathematical opposite. The more labour's productive power is developed, the less time is necessary for the production of a given quantity of use-values. Let us note in passing that this time involves labour executed at the average degree of intensity. This definition of necessary labour refers to what Marx calls 'the materiality of time':

Definite quantities of product, quantities which are determined by experience, now represent nothing but definite quantities of labour, definite masses of crystallized labour-time. They are now simply the material shape taken by a given number of hours or days of social labour.³

The technological definition of socially necessary labour time found in the first chapter is, however, 'corrected' later in the text:

He who satisfies his own need with the product of his own labour admittedly creates use-values, but not commodities. In order to produce the latter, he must not only produce use-values, but use-values for others, social use-values. ... Finally, nothing can be a value without being an object of utility. If the thing is useless, so is the labour contained in it; the labour does not count as labour, and therefore creates no value.⁴

Despite the fact that Marx does not use the term "socially necessary labour" time in this passage, he certainly has it in mind. It is therefore not enough that labour time be spent in 'normal' social conditions. It is not enough that this time be, indeed, labour and not labour-waste,⁵ as it also needs to be socially recognised.

2. Marx 1976a, p. 130.

3. Marx 1976a, p. 297.

4. Marx 1976a, p. 131.

5. One can, for example, produce the '20 metres of cloth' or the 'outfit' of 'the money form', not according to the average level of productivity and intensity of labour, but

This means that it has to be sold because the useful character of the time spent for the production of a commodity asserts itself solely when the commodity is sold.

Not only does this definition of social labour time *correct* the technological definition; the former also *contradicts* the latter. The first definition refers to the time spent by society (under normal conditions) for the production of a commodity. The second definition refers to the time that society recognises, subsequent to the production of this commodity, as socially useful. The first refers to the materiality of time expressed in commodities, while the second refers to the materiality of time expressed in money.

The only way of 'salvaging' Marx's text from the 'sin' of contradiction is to assume that the time spent for the production of a commodity, to the extent that it is technologically necessary, must necessarily be recognised by society. This is impossible, for there is no immediate relation between these two times. The former is a function of the productive power of labour, whereas the latter is a function of the balance of forces between the social classes. The former refers to the socio-technical conditions of production; the latter refers to the scope of the social need in relation to particular use-values. The former refers to the social division of labour; the latter refers to the distribution of income. The economist is, therefore, forced to choose: either he admits the contradiction as an objective contradiction, or he arbitrarily privileges – in the name of the (pseudo-) 'clarity' of his discourse – one of the two aspects of socially necessary labour time. Marx chooses the first solution, and does so at the beginning of *Capital*, as is shown by the following passage, taken from the third chapter of the first part:

If the market cannot stomach the whole quantity at the normal price of 2 shillings a yard, this proves that too great a portion of the total social labour-time has been expended in the form of weaving. The effect is the same as if each individual weaver had expended more labour-time on his particular product than was socially necessary.⁶

The tenth chapter of Volume III⁷ of *Capital* – the examination of which we are now undertaking – is, unfortunately, unfinished and often unclear. It probably lacks more than just the 'last touch'. Nevertheless, it is possible, on the basis of certain passages of this chapter, to reconstitute Marx's thinking with relation to socially necessary labour time.

according to individual methods and rates without any relation to the average level. The equivalent of these commodities – two ounces of gold – will, however, not change.

6. Marx 1976a, p. 202.

7. Marx 1981a.

Between the quantity of the article on the market and the market value of this article there is only this one connection: on a given basis of labour productivity in the sphere of production in question, the production of a particular quantity of this article requires a particular quantity of social labour-time... Moreover, in so far as society wants to satisfy its needs, and have an article produced for this purpose, it has to pay for it. In actual fact, since commodity production presupposes the division of labour, if the society buys these articles, then in so far as it spends a portion of its available labour-time on their production, it buys them with a certain quantity of labour-time that it has at its disposal. The section of society whose responsibility it is under the division of labour to spend its labour on the production of these similar articles must receive an equivalent in social labour represented in those articles that satisfy its needs. There is no necessary connection, however, but simply a fortuitous one, between on the one hand the total quantity of social labour that is spent on a social article, i.e. the aliquot part of its total labour-power which the society spends on the production of this article, and therefore the proportion that the production of this article assumes in the total production, and on the other hand the proportion in which the society demands satisfaction of the need appeased by that particular article. Even if an individual article, or a definite quantity of one kind of commodity, may contain simply the social labour required to produce it, and as far as this aspect is concerned the market value of this commodity represents no more than the necessary labour, yet, if the commodity in question is produced on a scale that exceeds the social need at the time, a part of the society's labour-time is wasted, and the mass of commodities in question then represents on the market a much smaller quantity of social labour than it actually contains.⁸

The use of the term 'social labour' must attract our attention, here. Marx uses this term in an explicitly contradictory way. The socially necessary labour time for the production of a particular commodity does not correspond to that recognised by society on the market. Therefore, a part of that social labour time goes to waste. The social contradicts and excludes the social.⁹

It is now necessary to examine this contradiction in a detailed way at the level of a particular productive branch, in the way that Marx does. His aim is to identify the link between the law of supply and demand and exchange-value.

As Marx writes when discussing supply and demand, if 'two forces act in opposing directions and cancel one another out, they have no external impact

8. Marx 1981a, p. 288.

9. The expression is Ruy Fausto's; see Fausto 1986, p. 173.

whatsoever'.¹⁰ It is appropriate, therefore, to present Marx's thinking first in relation to the determination of socially necessary labour time or the market value when supply and demand are in equilibrium. Setting aside the contradiction for a moment, we will be better prepared to confront the theoretical problems that it raises later on.

Marx assumes that in a particular branch of production there exist three classes of producers with different individual values. Marx examines the consequences on the social labour time when the relative weight of each one of these classes varies.

In the first case, socially necessary labour time coincides with the individual value of the class producing in average conditions. The two other classes – of which one produces in favourable conditions and the other in unfavourable ones – mutually neutralise each other. The market value is, thus, the statistical average of the individual values of the three classes.

In the second case, the class producing in unfavourable conditions is not entirely neutralised by the class in the other extreme, in such a way that the market value approaches (without, of course, coinciding with) the individual value of the class producing in unfavourable conditions.

Finally, in the third case the class producing in favourable conditions prevails over the class producing in unfavourable conditions. Thus, the market value approaches the individual value of the class producing in favourable conditions.

In the three cases, the logical principle is the same. Socially necessary labour time is always the statistical average of the three individual times.

Supply and demand never coincide in reality, or, if they do, it is by pure chance. However, this non-coincidence is not necessarily the expression of strong trends in the economy or structural disequilibria. It therefore becomes very easy, as a result, to admit that the disequilibria between these two forces produce gaps between the market value and the market price, gaps that cancel each other out from time to time. When supply exceeds demand, commodities are sold below their market value, and when demand exceeds supply, they are sold above their market value.

The gaps between market value and market price would not deserve any more attention if they only expressed weak economic trends. It so happens, however, that 'the solvent social need' can be subjected to abrupt and considerable mutations that have to do, for the most part, with the struggles over distribution.

10. Marx 1981a, p. 291.

Let us note here, but merely in passing, that the 'social need' which governs the principle of demand is basically conditioned by the relationship of the different classes and their respective economic positions; in the first place, therefore, particularly by the proportion between the total surplus-value and wages, and secondly, by the proportion between the various parts into which surplus-value itself is divided (profit, interest, ground-rent, taxes, etc.).¹¹

On the other hand, supply can also be subjected to abrupt mutations because of, for example, 'revolutionary' technological inventions. When the discrepancies between supply and demand are the expression of structural disequilibria, the definition of necessary labour time appears, surprisingly, for what it is: contradictory.

Once he has defined market value as the statistical average of the individual values of the three classes, Marx wants to take into account the scope of the 'social need' that is 'a factor of fundamental importance as soon as we have on the one hand the product of a whole branch of production and on the other the social need'.¹²

Let us take this mass [the mass of the commodities produced] to be the customary quantity supplied...If the demand for this commodity now also remains that customary, the commodity is sold at its market value, which may be governed by any one of the three cases investigated above. The mass of commodities not only satisfies a need, but it satisfies this need on its social scale. If however the quantity supplied is less than the demand, or alternatively more, this market price deviates from the market value. In the first case, if the quantity is too small, it is always the commodities produced under the worst conditions that govern the market value, while if it is too large, it is those produced under the best conditions; i.e. it is one of the two extremes that determines the market value, despite the fact that the proportions produced under the different conditions, taken by themselves, would lead to a different result.¹³

This passage¹⁴ is not very clear. Marx first attempts to examine the gaps between market prices and market values. Then, instead of speaking about these gaps, he speaks of the determination of market value itself. It is possible, according to him, when the scope of the social need is taken into account, that the market value might not be the average of the individual values of the three classes, but

11. Marx 1981a, p. 282.

12. Marx 1981a, p. 286.

13. Marx 1981a, pp. 286–7.

14. The translator of the 1968 French edition of *Capital* published by Gallimard does not translate this passage at all. He notes that Marx 'attempts to specify the modifications in market value with reference to supply and demand'; Marx 1968, p. 1756.

rather the value of one of the two extreme classes. Of course, one could think that Marx simply made a mistake in the terms he used in this passage, and that in place of 'market value' he should have written 'market price'. We do not think so. The gap between the market value and itself needs to be taken seriously.

Marx goes on to say the following: 'If the difference between the demand for the product and the quantity produced is more significant, the market price will diverge more sharply from the market value, either upwards or downwards'.¹⁵

From what could market value diverge, if not itself?

Finally, the following passage should do away with any lingering doubts:

At a given price, a species of commodity can only take up a certain area of the market; this area remains the same through changes in price only if the higher price coincides with a smaller quantity of commodities and a lower price with a greater quantity. If the demand is so strong, however, that it does not contract when price is determined by the value of commodities produced in the worst conditions, then it is these that determine the market value. This is possible only if demand rises above the usual level, or supply falls below this. Finally, if the mass of commodities produced is too great to find a complete outlet at the mean market value, market value is determined by the commodities produced under the best conditions.¹⁶

We see, here, in a more developed and explicit way, the reason why the concept of value is the product of a double negation. Marx is saying that value differs from itself because it does not represent on the market what it 'should' represent, if understood as a given quantity of labour.

The contradictory definition of socially necessary labour time is inseparably linked to the contradictory nature of the commodity. In reality, the contradiction of the commodity now appears in a different form: 'In the relationship of demand and supply for commodities we have firstly a repetition of the relationship between use-value and exchange-value, commodity and money, buyer and seller; secondly, we have the relationship of producer and consumer'.¹⁷

In the usual way of reading Marx, the determinations fall outside each other [*auseinanderfallen*]. The law of value and the laws of the market constitute, in this reading, separate geometrical spaces in such a way that one needs a passport to get from one to the other. This is not the opinion of Marx or Engels. Engels, defending Marx against Rodbertus, writes: 'Only through the fluctuations of competition, and consequently of commodity prices, does the law of value

15. Marx 1981a, p. 287.

16. Marx 1981a, pp. 279–80.

17. Marx 1981a, p. 294.

of commodity production assert itself and the determination of the value of the commodity by the socially necessary labour time become a reality'.¹⁸

The law of value is the 'order of disorder', the regulatory principle of decisions taken independently of each other. Value, or socially necessary labour time, imposes itself 'more quickly, (1) the more mobile capital is, i.e. the more easily it can be transferred from one sphere and one place to others; (2) the more rapidly labour-power can be moved from one sphere to another and from one local point of production to another'.¹⁹

Marx does not just define socially necessary labour time in a contradictory manner. He also proposes a theoretical solution to this contradiction. He states that given the major discrepancies between supply and demand, the quantity of value can be determined with one of the two extreme classes of his model as the starting point.

However, this solution seems to us quite unsatisfactory. Here, Marx attempts, contrary to his habits, to consider his object before the latter has had time to consider itself. What is the use in determining how much time is socially necessary for the production of such and such a commodity before this time can impose itself socially? What real theoretical value can the model of the three classes have if not to make clear the gap separating value from itself? Marx himself does not seem at all satisfied with his own argument: 'If demand and supply determine the market price, then market price in turn, and at a further remove market value, also determine demand and supply':

On top of this confusion²⁰ – the determination of price by demand and supply, and the determination of demand and supply by price – demand also determines supply and conversely supply determines demand, production determines the market and the market determines production.²¹

Indeed, Marx fails, in this chapter, sufficiently to reconcile the two concrete ideas he has in mind: namely, (1) that supply and demand end up being a 'tautology', and cannot explain value but can be explained by value; and (2) that the 'social need' and its scope is too essential a point to be neglected.

Certain Marxist analysts of *Capital* do not see any contradiction in the above. This explains why there are always new and more relevant interpretations of *Capital*. If the dogma of the principle of non-contradiction is not abandoned – a particularly sticky idea – the real meaning of *Capital* will never be grasped. We are thus following a path that is exactly the opposite of that taken by

18. Engels makes this claim in his preface to the first German edition of Marx's *Poverty of Philosophy*; Marx 1956, p. 20.

19. Marx 1981a, p. 298.

20. In the original text: 'Zu dieser Konfusion...'; Marx 1964, p. 201.

21. Marx 1981a, p. 292.

Jacques Bidet, who claims (if we understand him correctly) that the contradictions of *Capital* are 'enunciated according to the universal principle of non-contradiction'.²² The critique of Marx's contradictions – for example, that of Castoriadis²³ – already constitutes a more 'fertile' starting-point. Long before Castoriadis discovered the 'antinomy' of socially necessary labour time, Grigorovics already sketched out, in 1908, the history of this 'scientific misunderstanding'.²⁴ Rosdolsky correctly grasps the two aspects of social labour time. In relation to this issue he quotes Engels, who also believes that social labour is 'necessary for the single product, both in relation to other products of the same kind, and also in relation to society's total demand'.²⁵ Rosdolsky notes that many authors consider the 'contradiction' of the social labour time as intellectually 'intolerable', whereas, according to him, it is only 'apparent'.²⁶ Here lies the limit of Rosdolsky's reading whose arguments – attempting to show that the contradiction is only apparent – are unusually weak (almost non-existent) for an author who is so well acquainted with Marx's work.²⁷ Moreover, it is Marx himself who, speaking of 'confusion', invites us to re-examine the problems that remain unresolved in his work. The confusion, however, does not directly concern the contradiction, but instead the exact relation between the law of value and the law of supply and demand. The contradiction is real and must be posited as such and entirely accepted. This is what we will attempt to do in the following chapter.

22. Bidet 1985, p. 160.

23. See Castoriadis 1978, especially pp. 249–69.

24. Cited in Rosdolsky 1977a, p. 90.

25. Cited in Rosdolsky 1977a, p. 89.

26. Rosdolsky 1977a, p. 90.

27. Rosdolsky 1977a, pp. 90–5.

Chapter Four

The Hegelian Theory of Measure and Value as 'Essence'

A (paradoxically) similar problem to that of supply and demand can be found in the third chapter of 'Measure', entitled 'The becoming of essence'. 'Measure' is the third section of book one of Hegel's *Science of Logic*. It seems to us possible, by using some of Hegel's ideas, to further specify the relation between supply and demand on the one hand, and between the law of supply and demand and the law of value on the other.

In 'Measure', Hegel reflects on the intimate links between 'quality' and 'quantity'.¹

The second chapter of the section, entitled 'Real measure', is in part devoted to what the philosopher calls a 'nodal line of measures'. This expression designates a progression of a quantitative nature characterised by qualitative discontinuities.

The most popularised and well-known example of such a nodal line is probably that of water, which because of variations in temperature goes through the phases of solid, liquid and gas. Hegel emphasises the fact that the qualitative discontinuities of a nodal line do not take place 'little by little', but rather in an abrupt way, by qualitative leaps: 'Every birth and death, far from being a progressive gradualness, is an interruption of it and is the leap from a quantitative into a qualitative alteration'.²

1. The French edition of *The Theory of Measure* has an extended and very useful commentary by the translator André Doz.

2. Hegel 1989, pp. 369–70; Hegel 1969a, p. 440.

Another example of a nodal line is that of musical harmonies: 'While successive notes seem to be at an ever-increasing distance from the keynote, ... the fact is that there suddenly emerges a *return*, surprising accord'.³

Because of the similarities that can be observed between market exchange and chemical combinations, we are particularly interested here in the nodal lines concerning chemical relations. In the chapter on 'Real measure', Hegel presents various examples of such nodal lines of varying degrees of complexity.

Speaking of chemical substances such as acids and alkalis, he notes that they 'appear to be intrinsically determinate things just as they are, but the fact is that they are incomplete elements of bodies' trying to eliminate their 'isolatedness' in order to combine with one another. The qualitative nature of these substances is in a way wrapped in their quantitative aspect because it consists 'in the peculiar quantitative mode of the relationship'.⁴ More specifically, it is 'this specific quantity required for saturation' that 'constitutes the qualitative nature of a substance', for it is through this specific quantity that a body is 'what it is on its own account'.⁵ Hegel's observation can be transposed to the field of economics. The dominant social quality of the commodity consists in the quantitative terms according to which it relates to other commodities. The owner of the commodity wants to know the 'specific quantity required for saturation' of his commodity, namely, the amount of other commodities for which it can be exchanged. Moreover, Marx himself notices a similarity between chemical combinations and market exchange. Speaking of commodities, he notes that 'they are equivalents, just as simple chemical elements combined in certain proportions form chemical equivalents'.⁶

Let us return to Hegel's chemical combinations. The qualitative nature of a chemical substance (such as an alkali or an acid) can be specified using the 'characteristic series of exponents'⁷ resulting from its combination or neutralisation with those bodies likely to combine with it. For example, we have an acid (A) which, taken on its own, combines with a series of alkalis according to given proportions: we obtain the following characteristic series⁸:

(A) $a/A = 1/2$, $b/A = 2$, $c/A = 3$, and so on. (The numbers are, of course, chosen by chance).

3. Hegel 1989, p. 369; Hegel 1969a, p. 439.

4. Hegel 1989, p. 357; Hegel 1969a, p. 423.

5. Ibid.

6. Marx 1970, p. 34. This is not the only similarity observed by Marx.

7. Hegel 1989, p. 352; Hegel 1969a, p. 417.

8. On the relation between the first chapter of *Capital* and the theory of measure, see Doz's 'Analyse de la marchandise chez Marx et théorie de la mesure chez Hegel', in D'Hondt 1974, pp. 62–91.

The same principle also applies for another acid (B):

(B) $a/B = 1$, $b/B = (4)$, $c/B = (6)$, and so on.

Bodies B and A are, or rather become comparable, commensurable, by means of the numbers of their series. From this point on, this series becomes their 'determinate' and 'common unit'⁹ ($A = 2B$). Furthermore, the numbers of the B series put in brackets can be deduced.

Denis writes the following in relation to the above:

However, what needs to draw our attention is that the same law governs the exchange of commodities. For example, Walras provides the following formulation of this law: 'For the market to be at the state of general equilibrium, the prices of any two commodities one in the other must be equal to the relation of the prices of both in any third commodity'.¹⁰

After discussing the concept of 'elective affinity',¹¹ Hegel returns to these characteristic series in order to emphasise this time the neutral combinations. In this way, neutral combinations somehow become 'external to themselves'. In what does this externalisation consist? For example, when the first combination a/A materially disappears and cedes its place to the neutral combinations a/B and b/A , it does not entirely disappear. It is ideally present in a/B and b/A , because its qualitative subsistence is based on quantitative determinations that are implicitly present in these combinations. It thus disappears materially, but it continues to exist ideally, as well as a possibility.

Hegel then raises the question of whether there is a principle that is able to explain these neutral combinations that appear as a series of proportion relations ('relational measures'), with each possessing its own quality: why does $a/A = 1/2$, $b/A = 2$, and so forth? Could there be an invisible material substrate, a unique quality that is 'discreetly' present in all the qualitative states (the neutral combinations) of the nodal line? If this is the case, then these 'qualitative states' can be considered as different quantitative appearances of the same quality. And if this quality does indeed exist, it must contain the explanatory principle of its various phenomenal appearances according to the variations of its quantity, because in the opposite case nothing could allow us to confirm its existence and it would negate itself as a permanent quality in all the neutral combinations of the nodal line:

9. Hegel 1989, p. 353; Hegel 1969a, p. 418.

10. Denis 1984, pp. 68–9.

11. For a brief history of this concept, as well as an attempt to apply it to the social sciences (sociology of knowledge), see Löwy 1988.

The relation *to itself* of the measure relation is distinct from its externality and alterableness which represent its quantitative aspect. As related to itself in contrast to these, it is an affirmatively present [*seiende*], qualitative foundation – a permanent, material substrate which, as also the continuity of the measure *with itself* in its externality, must contain in its quality the principle of the specification of this externality referred to above.¹²

These reflections of Hegel's are, of course, complex. However, if we transpose them to the field of economics, we can follow them more easily. The neutral combinations or the 'relational measures' are, for us, the relations of exchange. It is as if Hegel was raising the question of whether there also exists – over and above the relations of exchange – a relation of exchange in the form of a material substrate that is implicitly present in all the relations of exchange. If this is the case, then what would its quality be if not its property of functioning as a regulatory principle of all the relations of exchange? In other words, in the simplistic interpretations of Marx, this material substrate would be abstract labour taken in its physiological meaning (consumption of the muscles and such); in neoclassical theory it would be 'scarcity'.

Unfortunately for neoclassical theory, as well as for the simplistic interpretations of Marx, Hegel has logically proven that this substrate – initially introduced in the form of a hypothesis – crumbles under the weight of its internal contradictions.

In order to simplify his analysis, Hegel reduces the number of the neutral combinations to two in the third chapter of the section on 'Measure', entitled 'The becoming of essence'. Each neutral combination is now considered as a moment, a 'state' or a 'side' of the substrate. In this way, the 'alteration [in the nodal line] is only change of a *state*, and the *subject* of the transition is posited as remaining the *same* in the process'.¹³

Of course, the subject of the transition remaining the same in the process is the substrate, which, as the regulatory principle, remains identical to itself despite its various quantitative expressions.

The substrate possesses, therefore, two states and is both of these states interchangeable. Consequently, this substrate is 'with respect to determinateness, *indifference*'. Hegel goes on to say that 'consequently, at first it is essentially the merely quantitative external difference which is present in it'.¹⁴

12. Hegel 1989, p. 367; Hegel 1969a, p. 436.

13. Hegel 1989, p. 373; Hegel 1969a, p. 444.

14. Hegel 1989, p. 376; Hegel 1969a, p. 447.

The states of the substrate can be expressed by a number (their quotient). If, therefore, the substrate is both of these states, it 'would' necessarily 'be the sum' of these two quotients. The states that are the moments or 'sides' of the substrate are, as a result, 'bounded... by the fixed limit of their sum'.¹⁵ To the maximum of one of the two states corresponds the minimum of the other. Hegel speaks of an 'inverse relation' between the two moments. As Doz notes, the term 'inverse relation' is not used in its mathematically exact meaning. The schema is not $X \cdot Y = S$ or $X/S = Y$, but $X + Y = S$, X and Y representing the 'sides' and S their sum.

Let us remember here that $a/A = 1/2$ and $b/A = 2$. Since the substrate is 'indifference', it would both be $1/2$ and 2 , that is, a sum of $2 1/2$. Thus, if, for example, the proportional relation of a to A changes upwards, then that of b to A must necessarily change downwards: to the maximum of one of the two states corresponds the minimum of the other.

What does this mean in economics? Hegel's neutral combination is materially a new product (salt, for example, when an acid combines with an alkali). No new material product is produced, at least when we are dealing with a direct exchange of particular commodities, from the relation of exchange in economics. It seems, therefore, that adding up the two quotients corresponding to the states of the substrate ($1/2$ and 2) is meaningless for us. However, from generalised market exchange a new social product is born: the mutual dependence of the producers and, of course, money. It is enough to consider the A of our logical exchanges as the form of the general equivalent in order to come up against a similar problem to the one Hegel was facing. If A is a unit of money, then $a/A = 1/2$ means that the price of the commodity 'a' ($a/A = 1/2$) is $1/2$ dollar, for example, whereas the price of the commodity 'b' ($b/A = 2$) is 2 dollars.

When Hegel writes that the substrate is the sum of the quotients of its states, he tells us nothing more and nothing less than what Marx tells us when he defines the sum of the prices of production as being equal to the social value produced. As in Hegel, so it is in Marx that given the total social value, if the price of production of a commodity increases, then the price of production of another commodity must necessarily decrease.

Let us return to 'measure' in order to follow the development of Hegel's thinking. The states of the substrate not only differ by virtue of their quantitative aspect. They also differ from one another by their quality. It follows from this that 'the substrate itself, as an indifference, is likewise in itself the unity of both qualities'. Thus, 'the one quality is through its quantum only *preponderant* in the one side, and so, too, the other quality in the other side'.¹⁶ Why? Because

15. Hegel 1989, p. 376; Hegel 1969a, p. 447.

16. Ibid.

if each quality (or state) of the indifference was based on itself, it would be an autonomy existing for itself and the substrate would be nothing. In other words, for the quotients of the two states to be interdependent, and for the substrate to remain qualitatively identical to itself despite the quantitative variation, the substrate must be, at any given moment, the unity of these qualities.

These qualities (a/A and b/A) should be quantifiable and therefore commensurable if the analysis is to move forward. However, these chemical substances only become commensurable when 'a' and 'b' represent particular and different commodities and when A represents money. They must therefore be reduced to simple expressions of two ideal and invisible factors that will be assumed to be quantifiable and commensurable.

It must, therefore, be assumed that these two qualities, or – something that amounts to the same thing – the various quotients of the nodal line, are a function of the interaction of these two factors or forces. If we want to explain the quantitative difference of the states of the nodal line with reference to the substrate, we must, furthermore, assume that one of these qualities (or 'factors' or 'forces') is necessarily 'through its quantum only *preponderant* in the one side, and so, too, the other quality in the other side', and that these forces act in opposite directions.

Hegel goes on to say that this is why each 'side of the relation' (or each differentiation of the indifference) is now in itself the 'inverse relation' of these factors, so that to the maximum of one of the factors necessarily corresponds the minimum of the other.

This means that the two states of the substrate are, from this point onwards, qualitatively defined by the surplus of one of the forces over the other. If we call the two states of the substrate X ($a/A = 1/2$) and Y ($b/A = 2$), and the two ideal factors x and y, the 'quantity required for saturation' $a/A = 1/2$ is assumed, for example, to be reducible to the relation $x > y$ that determines the quotient X. Similarly, the quantity required for saturation $b/A = 2$ is assumed to be reducible to the relation $y > x$ that determines the quotient Y.

Initially, the substrate (S) is defined (quantitative definition) as the sum of the two quotients ($S = X + Y$). But this definition has proven to be insufficient, because of the persistence of two apparent qualities. Thus, the substrate must satisfy another requirement: it must also be the unity of the two invisible qualities (or the two factors) that determine the quotients of the nodal line. The substrate (s) is also defined (qualitative definition) in the following way for each of its moments (we call 'd' a value of difference):¹⁷

17. The model presented here draws on that of Doz, which can be found in his commentary on Hegelian measure; see Hegel 1970a.

$$(X) s = \frac{x + d}{2} + \frac{y - d}{2}$$

$$(Y) s = \frac{y + d}{2} + \frac{x - d}{2}$$

This being the case, we need to show that the substrate is 'a contradiction in every respect' and that it cancels itself on its own accord.¹⁸ For the substrate hypothesis to be taken seriously, it must actually be assumed that the two factors are in constant equilibrium and 'that by as much as the one increases or decreases, the other likewise would increase and decrease'.¹⁹ If they are not in equilibrium, only one of the two factors remains through its surplus, for the second factor would entirely disappear. It is as if – setting aside the quantitative aspect – the second factor had never existed. We have admitted, however, that the substrate is at any given moment the unity, the coexistence of these two factors or forces acting in opposite directions. Instead of having for each of the two states an apparent quality, independent and irreducible to that of the other state, we have an equally independent invisible factor.

However, if the two factors are permanently in equilibrium, then how are we to explain the quantitative differences between X and Y on the basis of this substrate? Hegel concludes that 'each of these hypothetical factors vanishes, whether it is supposed to be *beyond* or *equal to* the other'.²⁰

Hegel also illustrates the above ideas using the example of the elliptic movement of the planets. The curvilinear movement cannot be explained by the interaction of the centripetal and the centrifugal forces – these two forces acting in opposite directions. Rather, these two forces refer to an '*alien* force' that would be at the origin of the 'reversal'²¹ of this movement, its accelerations and its decelerations.²² It is useless to note here that what we are interested in is neither Hegel's archaic chemistry nor his opinions on the elliptic movement of the planets. Moreover, for him, chemistry is just a 'pretext'. The discussion is neither about chemistry nor about cosmology, but is, instead, about logic. Hegel uses these examples as concrete moments that enable him to reflect on the intimate link between 'quality' and 'quantity'.

The *two* factors can only be, in economics, supply (x) and demand (y). Hegel tells us that these two factors cannot explain the fluctuations in price. If these

18. Hegel 1989, p. 379; Hegel 1969a, p. 451.

19. Hegel 1989, p. 379; Hegel 1969a, p. 450.

20. Ibid.

21. Hegel 1989, p. 381; Hegel 1969a, p. 453.

22. For those interested in the scope and limitations of these Hegelian ideas, see the scholarly commentary by André Doz as well as Hegel's text itself.

two forces are always in equilibrium, then how can we explain the difference in prices ($Y > X$)? Two forces of equal power acting in opposite directions cancel out each other and have no external repercussions. If there is a quantitative difference between these two forces, then another question arises: what is 'supply' without the corresponding 'demand'? The first thing that comes to mind is that an equilibrium price will arise so that x and y are equalised. But, precisely, if this is the way in which x and y are always in equilibrium, then how are we to explain the quantitative difference between X and Y ? As André Doz puts it, 'either indifference does not succeed in differentiating itself, or, in the case that this differentiation does indeed arise, then that's that for indifference'.²³ This means that the two requirements of the substrate cannot be satisfied simultaneously: if the requirement of its 'qualitative definition' is respected, then the quantitative differences separating its states cannot be explained. Similarly, every attempt to explain the quantitative differences destroys the 'qualitative definition'.

In our numerical example we had two commodities of differing use-values – a different apparent quality (a and b) – whose relative values were expressed in A (money, the universal commodity). Apart from their apparent qualities (their use-values), it can be assumed that an invisible and common quality exists because the two particular and different commodities present 'specific quantities required for saturation', which only differ quantitatively from each other ($a = \frac{1}{2}A$ and $b = 2A$). Moreover, the producers of commodities are interested not in their apparent use-values, but in their 'specific quantities required for saturation'. Up until now, no common quality has been observed.

The same reasoning can be applied to the same particular commodity whose relative value (the specific quantity required for saturation) changes from one moment to the next. Let us say, for example, that the relative value or the price of the commodity ' a ' is lower at the moment t_2 than at the moment t_1 , and let us assume that its supplied physical quantity has increased. Can this increase in its supply explain the price variation? Obviously not, for the variation in the physical quantity supplied can be accompanied by an equivalent variation of the solvent social need for that same commodity. The Hegelian logic presented above is not only valid for the nodal line also presented above. It is also valid for other nodal lines whereby the combinations only include two substances that have different qualities according to the proportions of the combination. The combinations of oxygen and nitrogen are one example of this: the same substance has different 'specific quantities required for saturation', in the same way that a particular commodity can have different prices at different points in time.

23. Hegel 1970a, p. 176 (commentary by Doz).

In the first case ($a/A = 1/2$, $b/A = 2$), we had two different apparent qualities, with different specific quantities required for saturation, and we looked for the principle of the commensurability of their specific quantities required for saturation. In the second case, we had a single apparent quality that presented different specific quantities required for saturation at different points in time. We therefore looked for the reason why this same apparent quality presents different specific quantities required for saturation. This led us to look for a principle of commensurability independent of the apparent quality. In both cases, we failed.

We started from Hegel's philosophical reflections that belong to the field of pure logic, but nevertheless we arrive at very concrete economic conclusions: supply and demand cannot be based on themselves. They refer to a third term, on the basis of which we can talk of a 'surplus' of one of these factors in relation to the other. Contrary to the relation of supply and demand, the third term must be based on itself and explain, on its own, the quantitative variation.

As a result, this third term cannot be the 'scarcity' of the commodities under examination, for the notion of scarcity has no meaning outside of the relation of supply and demand. If this relation is set aside, then scarcity would simply be a function of the physical quantity of commodities. It is hardly necessary to note that commodities as physical quantities constitute incommensurable magnitudes. In what way could commodity Z of a quantity z be said to be more or less scarce than the commodity P of a quantity p ? These quantities (z and p) are metric standards that have been arbitrarily chosen. They are external measures chosen in such a way that the comparison of physical objects with each other as physical quantities on the basis of one of their natural properties can be rendered possible. What is the relation that exists between metric standards of this type and the social 'weight' of the commodities? This is a mystery. The notion of scarcity acquires a certain meaning when we start talking of 'prices' and 'money', in short, of a common social standard. Commodity Z is scarcer than commodity P because commodity Z is exchanged for two dollars whereas commodity P is exchanged for one dollar. But in this way, the argument is the opposite of what it claims to be. Z is scarcer than P because it is dearer, not the other way round. Up until now, no objective logical principle regulating the relations of exchange has occurred. *The* relation of exchange does not exist.

Let us assume that this third term, which must be based on itself, exists, and let us call it 'abstract labour' for the moment. The surpluses of supply in relation to demand and vice versa can, therefore, only point to a different equilibrium to that dictated by abstract labour. More specifically, the only way of conceiving of the disequilibrium between supply and demand is to conceive of it as an equilibrium in terms of prices that differs from the equilibrium in terms of abstract labour (a different equilibrium from the equilibrium that would coincide

with the recognition of actually expended labour). In this way, the difference between the two factors means that a specific social need requires more or less labour time devoted to the particular commodity that corresponds to it.

However, it could be said that Hegel's ideas equally apply to socially necessary labour time. But for a detail, this is indeed the case, yet the detail in question is crucially important: social labour time posited as indifference succeeds on its own to differentiate itself and to explain the states X and Y. This time is defined in a contradictory way. However, if we identify its two definitions to factors x and y, and if we assume the equilibrium of these factors in the state X and in the state Y, the quantitative variation ($Y > X$) has nothing mysterious about it: it results from the variation in the quantity of abstract labour devoted to the production of commodities that are involved in the process of exchange. We are in a position to assume this equilibrium, for the non-recognition of the social labour time actually exists in the form of a 'shortage' within the productive subject leading to the mobility of capital and regulating the social division of labour.²⁴ Labour time can also be based on itself 'negatively'.²⁵ On the other hand, if we set value aside, the surplus of supply in relation to demand (or conversely) that corresponds to it cannot be based on itself, for there is no rational means enabling us to define this surplus as a surplus. Factors x and y are no longer considered to be two forces that only act in simple circulation, but also in the production process.

The negation of the substrate is one of the main logical categories in Hegel's work. He calls this category 'essence', and devotes to it the second part of the *Science of Logic*.

Hegel writes that indifference has proven to be 'a contradiction in every respect; it therefore has to be *posited* as sublating this its contradictory nature and acquiring the character of a self-determined, self-subsistent being which has for its result and truth not the unity which is merely indifferent, but that immanently negative and absolute unity which is called essence'.²⁶

Essence is therefore a 'negative and absolute unity' that is 'self-determined', that is to say, it is 'nothing' at the level of Being and cannot be part of the immediate Objectivity. This means that certain 'properties' – such as 'associativity', 'relation' or 'blood relationship' – do not belong to the 'material object'. They are requirements of the thinking subject faced with this object.

Our analysis results in a definition of value that is very close, if not identical, to Hegelian 'essence'. A question, however, arises: if value is essence and

24. This is why the notion of abstract labour necessarily implies a certain mobility of capital, including variable capital, namely, labour.

25. It can be said that the surplus of demand in relation to supply can also exist in the form of a 'shortage'. Let us note that we are not dealing with social need in general, here, but with solvent social need.

26. Hegel 1989, p. 379; Hegel 1969a, p. 451.

essence is 'nothing', how can value be 'labour'? 'Labour' defined as value is not an immediate reality. There is nothing material about it. As we have already noted, according to Marx, it differs from Falstaff's friend inasmuch as we do not know from where to take it.

Labour-value is a requirement of the subject faced with the object. And the subject, in our case, is not Marx, and even less so Hegel. It is neither economic nor philosophical thinking, but rather the 'abstraction in actu' of the capitalist economy, the unfolding economic rationality, the alienated reason governing social life, namely, social capital.

In Marx, value is the link that connects the labour time devoted to the production of a particular commodity with the labour time society offers for the purchase of this commodity. It is a property of the capitalist mode of production that these two times only accidentally coincide. Value cannot, therefore, be part of the sphere of Being. Value appears as a thing that is in contradiction with itself. Its *raison d'être* consists in this contradiction.

However, it has also been shown that this contradiction does not take away from value its 'substantial content'. The dialectic of the substrate does not set us free from a certain 'naturalism' related to the notion of labour.²⁷ It only sets us free from the strict and limited language of quantity and measure.

Value or socially necessary abstract/general labour time can be defined as a 'metric relation'²⁸ between a particular commodity and the solvent social need that corresponds to it. This definition is, however, very unsatisfactory, since in reality it presupposes the economic state of equilibrium. Value is an autonomous and dominant social relation precisely because this equilibrium does not exist. If the starting-point is the representation of equilibrium, value-labour appears as a flimsy concept (for other reasons, obviously, than the ones that give rise to the negation of the substrate), and ceases to be a social relation. If the starting-point is the representation of disequilibrium, every positive definition of value is destroyed because value must be the other of itself.²⁹ Value, therefore, is 'a self-determined, self-subsistent being... immanently negative'. It is 'essence'.

27. Marx writes: 'if we leave aside the determinate quality of productive activity, and therefore the useful character of the labour, what remains is its quality of being an expenditure of human labour-power. Tailoring and weaving, although they are qualitatively different from productive activities, are both a productive expenditure of human brains, muscles, nerves, hands, etc., and in this sense both human labour.... [T]he value of a commodity represents human labour pure and simple, the expenditure of human labour in general'; Marx 1976a, pp. 134–5.

28. Such as the 'specific weight' of a body, that is, the relation of the weight to the volume.

29. In other words, it is either a quantity of abstract labour, carried out in 'normal' technological conditions ('normal' for the producers at least), or a quantity of abstract labour expended in a useful way and recognised therefore by the consumers. If the starting-point is the representation of a partial and accidental equilibrium, then

This definition of value is not unrelated to a very enigmatic expression of Marx's in the preface of the first edition of *Capital*: 'Intrinsically, it is not a question of the higher or lower degree of development of the social antagonisms that spring from the natural laws of capitalist production. It is a question of these laws themselves, of these tendencies winning their way through and working themselves out with iron necessity'.³⁰ The first 'normal' reaction of the attentive reader of *Capital* is to observe a 'paradox': either the law is natural and is manifested with iron necessity, or it is merely a tendency. Defining value as an autonomous and immanently negative unity enables us to conceive of it as a 'natural' law imposing itself, as a tendency, with iron necessity.

Defining essence or value as a 'self-subsistent being' amounts to defining it as a 'relation' [*Beziehung*]:

In Essence no passing-over takes place any more; instead, there is only relation. In Being, the relational form is only [due to] our reflection; in Essence, by contrast, the relation belongs to it as its own determination. When something becomes other (in the sphere of Being) the something has thereby vanished. Not so in Essence: here we do not have a genuine other, but only diversity, relation between the One and *its* other. Thus, in Essence passing-over is at the same time not passing-over. For in the passing of what is diverse into another diversity, the first one does not vanish; instead, both remain within this relation.³¹

The commodity as 'being' disappears in the 'other' (money). The social labour time of the commodity does not disappear in that of money, but both remain in their relation. The economic disequilibrium is permanent, but the tendency towards equilibrium, which is manifested with iron necessity, is equally important. The 'other' of the value of the commodity (money) is its 'other', and value is not lost in this movement for *it is this movement*.

Thus, the so-called 'disequilibria of supply and demand' are in reality a mere 'tension' within value. This tension is at the origin of the movement of capital, of the constant redistribution of labour time in the various productive sectors.

value is rather a 'metric relation'; if the starting-point is a tendential equilibrium, then value imposes itself through the negation of the negation; if the starting-point is the representation of a situation of crisis or profound disequilibrium, at the same time that it seems incompatible with itself, it asserts its efficiency more strikingly than ever. It is not by chance that, since the beginning of the long contracting wave (early 1970s until today), 'practical businessmen' as well as the 'management' of the structural crisis placed at the centre of their strategies the working time, its intensity, remuneration and flexibility, whereas non-Marxist or ex-Marxist economists seem to reject more and more the labour theory of value.

30. Marx 1976a, pp. 90–1.

31. Hegel 1991b, p. 173; Hegel 1970e, pp. 229–30.

Capitalist crises are the method employed by value in order to overcome its internal tension when the latter becomes unbearable.

'Being or immediacy which, through self-negation, is mediation *with itself* and relation to itself... this being or immediacy is *Essence*'.³²

This definition of value is not simply a modest contribution to the reading of *Capital*, enabling us to overcome very old quarrels, including those within the Marxist tradition. It is also an even more modest contribution to a reading of the capitalist economy that allows us to overcome the unbearable dualism between theory and reality. On the one hand, we have 'Notions' that correspond to situations of equilibrium, while on the other, we are forced to admit that this equilibrium does not exist. However, the non-equilibrium requires much more than an addition to the analysis in terms of equilibrium. As we have seen, it requires entirely different 'Notions', which cannot be put in mathematical terms and are superior to those of the logic of identity. Every detailed reading of *Capital* ends up proving that value cannot be reduced to a kind of productively expended and rigorously quantifiable 'human energy' distributed across the economy, so that the disequilibria at the level of each productive sector mutually compensate for each other. It ends up proving that no perfect equalisation, despite the momentary disequilibria, between the social labour of a given productive sector and the social labour recognised by the market is logically possible. The perfect compensation does not free us from the equilibrium and its determinations. It makes us prisoners of vulgar and insurmountable contradictions.

It is wrong to assume that the movement of prices is such that the prices above or below the value of a sector compensate for one another with time. In what stretch of time would that happen? In a year's time? In the time of the industrial cycle, or in a century? The temporal unit of measure can only be purely arbitrary, and if there is compensation, it would be purely accidental. Moreover, in a system where the value invested is actualised anew with every evolution in productivity, any compensation at a future point in time is practically impossible. Similarly, the undervalued labour time of a given sector does not at all imply, automatically, an overvalued labour time in another sector so that the differences compensate each other. The market can undervalue the labour time in one sector without at the same time overvaluing the labour time in another. This is, by the way, the reason why credit, monetary policy, the psychology of agents more generally, anticipation, and so on, can play a determining role in the economic conjuncture. One can only speak, at the most, of a tendency towards

32. Hegel 1991b, p. 173; Hegel 1970e, p. 229. Here is the original passage: 'Das Sein oder die Unmittelbarkeit, welche durch die Negation ihrer selbst Vermittlung mit sich und Beziehung auf sich selbst ist, somit ebenso Vermittlung, die sich zur Beziehung auf sich, zur Unmittelbarkeit aufhebt, ist das Wesen'.

compensation accentuated or moderated by economic policy. Shmuel Amir and Jörg Baumberger, in an article entitled 'On the meaning of equilibrium and disequilibrium in economic systems',³³ after putting forward remarkable arguments, come to a general conclusion similar to the one presented here:

Disequilibrium is not simply a state that requires an additional analysis in relation to a state of equilibrium; it is something qualitatively different.... We share with other critiques of equilibrium theory the feeling that the moment has come to follow new research paths, but we have many reasons to suspect that the univocal rigour of analytical discourse, i.e. essentially mathematical discourse, will tend to disappear once we move towards the understanding of real phenomena.³⁴

Perhaps these 'new ways' are, in reality, very old ones that have gone unnoticed. We do not contest the fact that Marx 'flirts' with imaginary equilibrium situations. We contest the idea that this flirt, an otherwise necessary one, is the beginning and end of his theory of value. *Capital* appears as a coherent system of determinations, provided that we accept the need to re-examine certain unresolved problems, such as the social labour time, the transformation of values into prices of production, and so forth. There is nothing more suspect of dogmatism than the 'orthodoxy' concerning 'solutions' that the author of *Capital* himself considered as temporary.

We would say, therefore, as a conclusion, that Aristotle's 'commensurability' and Hegel's 'dialectic' are likely to enrich one another. Correctly, Marx began the attempt to 'reconcile' them, even if this attempt was not completed.³⁵

33. Amir and Baumberger 1979, pp. 339–65.

34. Amir and Baumberger, cited in Denis 1984, p. 148.

35. Denis has remarkably shown that between the labour theory of value and the theory of 'dialectical' value in Marx (present in both the *Grundrisse* and *Capital*), there exists a tension. Contrary to Denis, we do not think that these 'two' theories are 'incompatible'. Thus, Marx's partly incomplete economic theory is not the history of a failure; see Denis 1980a. See also Chapter Nineteen of this volume, specifically subsection 19.2.

Section Two

From Simple Circulation to Capital

Chapter Five

The Process of Exchange: Historical Time and Logical Time

The coexistence of a historical temporality (5.1) with a logical temporality (5.2), in the first part of *Capital*, should not be seen as a poor decision on Marx's part that results in the meaning of the text being difficult to discern. Rather, the coexistence of historical and logical temporality is itself a logical necessity, and, consequently, its analysis is equally necessary for understanding the first part of *Capital*. For purposes of simplification, we examine the two temporalities separately.

5.1 Historical time

Marx distinguishes three historical stages in the development of the commodity: (1) a stage during which use values become occasionally and accidentally commodities through and in the exchange process; (2) a stage during which the market exchange of labour products becomes a social habit and use values are produced for the market; and finally, (3) a stage where the commodity only becomes intelligible as a part of a living organism.

Market exchange begins, according to Marx, at the 'point of contact with foreign communities' and then penetrates little by little into these communities. During this (pre)historical stage of the commodity, the commodities' 'exchange-relation is at first determined

purely by chance'.¹ One sees, therefore, that the commodity examined here has only a very distant relation to the commodity of the first chapter of *Capital*, which exchanges according to strictly determined proportions.

The relation between the two bartered commodities can be characterised as mechanical and external. The commodity for sale serves its possessor as a means likely to attract the interest of the buyer. The seller exercises on the buyer – thanks to the commodity – a force of attraction, but commodities do not attract each other by virtue of their own nature.

As market exchange becomes an increasingly regular social practice, and production becomes more market-oriented, the 'mechanical relation' transforms itself into a 'chemical relation'. The contact between commodities on the market brings out something that did not exist before, something that does not possess any of the particular qualities of those commodities, but which possesses the social quality of every commodity: value/money.

From that very moment, commodities, in their immediate and isolated existence, have no meaning unless considered in their relation to other commodities. They are, like chemical substances, incomplete elements that mutually attract one another by virtue of their own nature. The 'quantitative proportion in which the things are exchangeable becomes dependent on their production itself. Custom fixes their values at definite magnitudes'.²

Marx criticises the economists of his time because, according to him, they interpret market exchange in a mechanical way. He believes that money constitutes, in the history of the commodity, a superior stage to that of simple barter and one that is irreducible to the latter. It is in this specific sense that he writes the following critical and ironical lines:

On the other hand, they [the economists] then persistently regard barter as a form well adapted to commodity exchange, suffering merely from certain technical inconveniences, to overcome which money has been cunningly devised. Proceeding from this quite superficial point of view, an ingenious British economist has rightly maintained that money is merely a material instrument, like a ship or a steam engine, and hence is not an economic category. It is therefore simply a malpractice to deal with this subject in political economy, which in fact has nothing in common with technology.³

Money is, therefore, not a simple means, but is instead the expression of a social relation of production that cannot exist without money. Exchange-value, which is this relation, already appears as autonomous and independent, for to the

1. Marx 1976a, p. 182.

2. Ibid.

3. Marx 1970, p. 51.

extent that it is the direct link between commodities, it appears as a barrier and an obstacle between producers. The market gradually sets itself up as an autonomous factor vis-à-vis the producers, who directly depend on the former and indirectly on each other.

Is the commodity that corresponds to this historical stage that of the first chapter of *Capital*? According to Marx, this is not yet the case: 'If the value of commodities is determined by the necessary labour-time contained in them and not simply by labour-time as such, it is capital that first makes a reality of this mode of determination'.⁴

In the simple barter C-C, there is already, in the second commodity, the idea of money, but it is not yet real money, nor is the first commodity the real commodity: 'The direct exchange of products has the form of the simple expression of value in one respect, but not as yet in another'.⁵

In the exchange mediated by means of money C-M-C (without any other specification of this relation), the idea of the commodity and money is already developed, but not yet completed. The real, according to Hegel, is not the formal harmony of the object with a content that happens to be its own, but the harmony of an object with itself, that is to say with its Notion.⁶

Therefore, if, on the one hand, capital presupposes the commodity and money, because it is the unity of the two in movement, on the other hand, the real commodity and real money presuppose capital. In the simple process of circulation C-M-C, the aim of the exchange does not appear in the series of metamorphoses. A particular commodity is transformed, through money, into another particular commodity. The first commodity is a means for its seller, the second one a use-value. The starting-point and end-point of the transaction are not the same, despite their economic form being the same.

The producer sells in order to buy, while the economic subject is man and exchange is the means by which this subject satisfies its needs. Of course, man depends on the market in the same way that he depended in the past on weather conditions. Man remains, however, the only economic subject: the economic aim of each producer is his own conservation and reproduction. His economic relation appears as an autonomous and natural condition, but not yet as a complete and hostile subject facing the producer. The autonomy and the antagonism of the economic relation vis-à-vis the producers are historically incomplete. Natural conditions are independent from the will of man, but they do not have their own will.

4. Marx 1981a, p. 180.

5. Marx 1976a, p. 181.

6. Hegel 1991b, pp. 249–50; Hegel 1970e, p. 323.

The same is not true when it comes to capitalist circulation $M-C-M'$. This circle can be that of a purely merchant capital just as it can be that of capital *tout court*. In the first case, we are dealing with a simple teleological process, that is, a process that can be understood by reference to its end-purpose. In the second case, we are dealing with the same process but with the difference that it is now part of the teleological activity of a living organism.

5.2 Logical time

It follows from the above that, firstly, historical time is not 'illogical'. Historical development coincides with that of the Hegelian Notion, since the 'mechanism', the 'chemism', the 'teleology' and the 'life' we have just mentioned correspond to specific moments of the Hegelian doctrine of the Notion (which we will return to in the following chapter). Historical time cannot be absolutely illogical, that is to say, purely chronological and descriptive, for the three moments of the commodity are intertwined in historical space and time, and appear in a chaotic manner. Here Marx is interested in the intermediary stages of prehistory or the coming into being of a subject, and this is the case only to the extent that these stages are useful for understanding the subject's current nature. Secondly, if it is true that the commodity and money precede capital, then it is equally true that these three terms form a unity and are of the same age. A circle becomes what it is at the moment of its completion, by means of a qualitative leap.

The capitalist order is, as a matter of course, the totality or the circle we have just discussed. The economist who wants to analyse it must first of all find its beginning, for this circle has a beginning. This beginning is a logical and not a historical one. Indeed, the exchanges outlined in the first chapter of *Capital* are not historical but logical.

The commodity of the first chapter of *Capital* presupposes money and capital, implies them and aims at positing them. More specifically, the first chapter deals with the logical genesis of money that at the same time is the distribution of roles between the commodity and money. This will allow us to posit capital later on.

The first chapter of *Capital* begins with the commodity not because it historically precedes capital but because it is the simplest object. Money is not only a commodity; it is also a universal commodity. It is therefore more than just a simple commodity. This is why money cannot constitute the starting-point. The relevance of this beginning has often been contested on the basis of more or less sophisticated arguments. Benetti and Cartelier's⁷ argument is, unquestionably, a

7. Benetti and Cartelier 1980.

very interesting one. Even more interesting is the critique of this critique offered by Fausto.⁸

The first necessary condition for understanding the forms of value outlined in the first chapter has already been mentioned. The temporality that governs them is not historical but logical.

The second condition is that logical time is not absolutely ahistorical. In other words, the forms of value are not pure theory, pure logic or an arbitrary choice. They carry the weight of the completion of a history, of an end that has to be analysed logically. This means, essentially, that the first three forms of value are not the historical past of form IV, but a past illuminated by the light of the present, reconstructed not as it really happened, but logically – in a way that renders the money form intelligible, and places the commodity and money where they belong.

The first three forms of value are of a syntactical nature and it is not by chance that in form III (the form of general value) the first two forms are not only eliminated but also conserved.

If one reads form III backwards – if one sees things in the manner of the exchanger who possesses the general equivalent – then one obtains form II (total or developed value form). This form is therefore conserved. The particular commodity that each exchanger possesses is, for him (subjectively), that commodity's general equivalent. But since all exchangers of form III find themselves in the same situation there is only (objectively) a single equivalent. Form II is therefore eliminated.

The simple form (I) is also conserved in form III. Each particular commodity, taken in isolation, is exchanged against the general equivalent. It therefore finds itself, in a certain way, in the situation of the active commodity of form I. It is useless to add that Marx's claims about the content of this form and the particularities of the equivalent also hold for form III. Form I is also eliminated because the general equivalent does not express (objectively) an isolated relation, but, on the contrary, relates the most diverse of commodities, as values and quantities of value, to each other.

Moreover, this is the reason why this equivalent cannot be the cloth of form III, but has to be the gold of form IV. The natural characteristics of the money form are not indifferent, for they represent abstract labour time. The passage from form III to form IV is of a semantic nature, and what is said about form III also holds for form IV.

As a conclusion, it needs to be highlighted that the main difficulty of the first part of *Capital* is in the simultaneous presence of a logical and a historical

8. Those interested in a rigorous commentary of the forms of value should refer to Fausto 1986.

discourse. These are two parallel discourses under the overwhelming dominance of the logical discourse. The historical discourse is reduced to an auxiliary role.

The two discourses correct one another, and in so doing contradict each other. The matter becomes all the more complicated since the logical discourse is not ahistorical, nor is the historical discourse illogical. Why does Marx choose this rather complex form of exposition? Most likely because in the beginning of a circle there is already the idea of the end. In order to analyse the concept of capital, the commodity and money need to be assumed as completed objects. The latter precede capital logically, not historically. At the same time, it is impossible to proceed chronologically or historically, for Aristotle's bed or house have as much a relation with the modern commodity as does the ape with man.

We are now in a position to answer a question that, for a long time, has been a subject-matter for the literature dealing with the first part of *Capital*. As a matter of fact, what is the object of this part? A pre-capitalist market order or rather capitalism? There is nothing more entertaining than the quarrels surrounding this issue, for there are as many arguments in favour of the former as of the latter thesis. The one refers to the other and what remains is the spurious infinity, which one can only avoid by abandoning both theses. Both theses are wrong, although not to the same extent. The first is vulgar. The second is not entirely wrong, as we will see. More specifically, and in the last analysis, the first part deals with capitalism, but to understand why this is so one must pass through the landscapes of contradiction.

It is clear that the forms of value, with the exception of form IV, do not exist as such, positively and objectively, in capitalism. It is equally clear that socially necessary labour time exists (for Marx at least) only in capitalism. This simple contradiction (there are others of the same type), on its own, allows us to refute both theses at the same time. The first part deals neither with a pre-capitalist market order nor with capitalism strictly speaking (besides, what is capitalism without capital?). Could it have as its object a third term that is neither of the two terms mentioned above?

'In order to get out of the antinomic circle of the spurious infinity', writes Fausto,

one need not look for other lands, since such lands do not exist, but to insert oneself in this circle. This operation is, thus, the most difficult of operations because it is the easiest one. Instead of avoiding the antinomy, one needs to accept it, i.e. to posit it. The posited antinomy is the contradiction. It needs to be said therefore that the object of the first part is and is not capitalism, it refers and does not refer to capitalism, here is the answer.⁹

9. Fausto 1986. p. 222.

Indeed, this answer is already relatively satisfactory. But as Fausto himself also admits, 'such an answer needs to be specified' – he specifies an answer later on in the same book. The first part of *Capital* deals with the 'surface' of the capitalist mode of production, with the voluntary exchange of equivalents, an exchange whose legal form is the contract and which entails the mutual recognition of agents as private owners, as free and equal individuals.

In order that these objects may enter into relation with each other as commodities, their guardians must place themselves in relation to one another as persons whose will resides in those objects, and must behave in such a way that each does not appropriate the commodity of the other, and alienate his own, except through an act to which both parties consent. The guardians must therefore recognise each other as owners of private property. This juridical relation, whose form is the contract, whether as part of a developed legal system or not, is a relation between two wills which mirrors the economic relation.¹⁰

At the starting-point there are the logical exchanges of the first chapter that will result in money and, finally, in the logical circle C-M-C that is simple circulation. We have here a logical circle, in that its moments already possess certain determinations that they only possess historically with the development of industrial capital. Industrial capital, however, is absent from the logical development of the first section (or, more specifically, it is not explicitly present). This logical circle of simple exchange does not constitute the surface of capital in opposition to production, which would be its foundation. It constitutes the surface inasmuch as it points to the existence of a relation of equality between commodities and men, to the merging of various free wills and to the mutual recognition of private properties. These are 'superficial' determinations, that is, immediate ones, and are those most accessible to ordinary consciousness. Besides, production is absent from neither the first chapter nor the first section. Commodities are the products of labour, and labour is analysed at great length. They are the unity of value and use-value. From the first pages of *Capital*, Marx not only presents the 'surface' (exchange relations, and so forth), but also reflects on its foundation (abstract labour, and such like).

This relation of equality both is and is not capitalism. The relation is capitalism inasmuch as the legal equality, the contractual form, the free individual, the voluntary exchange of the products of labour (and therefore the exchange of equivalents) and so on, are in no way pseudo-realities, but instead are essential determinations of the capitalist system. The relation of equality is not capitalism to the extent that these determinations are not the whole truth, the only truth,

10. Marx 1976a, p. 178.

but are determinations based on a superior relation. They are non-autonomous or independent. They are the flip-side of the coin, the other face of the same subject. This relation is industrial capital. The latter is a relation of not only equality between private producers, legal individuals, but also one of inequality between economic classes. It is the historical product of bloody events, the original sin that leaves its stamp on current affairs and which will accompany the order established by capital until its end. In this relation, simple circulation and its determinations do not disappear. They remain under an eliminated form. They are *aufgehoben*.

The first part of *Capital* is the presentation of a logical object, in reality conserved and eliminated by and in capital; before this object has been subjected to that operation, it is the presentation of an *aufgehobenes* object. Before it becomes *aufgehoben*, it is the positive presentation of an object that, however, negates itself. It is as if production was oriented towards the satisfaction of need as attested by the circle C-M-C, whereas this circle is only a moment in the circuits of capital whose end-purpose consists in the valorisation of value. It is as if the process that produces commodities and money, and is entailed in C-M-C, was subject to the end-purpose of the satisfaction of need, which Fausto calls 'simple production'. The circle C-M-C is inseparably capitalism and capitalism's falsehood.¹¹ It is, moreover, the discovery of this falsehood (see chapter 7 below) – that simple circulation cannot hide effectively – which will allow Marx to move on to industrial capital so that the circle can be, at last, completed.

But simple circulation and its determinations, such as they appear in the first part, refer to capitalism for a different reason, namely, the fact that falsehood, illusory appearance or the surface are not indifferent or inessential, but rather foundational determinations of the economic order. The way in which agents understand their social relations can be wrong, partly wrong or correct, but it is never a fake reality. Ideology is part of the social relation as much as surplus-value, for it is no less essential for the normal functioning of the system.¹² And this ideology (we will have the opportunity to come back to this) is not the product of extra-economic forms, but the product of the economic relation itself, as is surplus-value. The first part of *Capital* is the path that will lead (in the second part of *Capital*) to the discovery of a mysterious time, hidden in

11. Using a more 'technical' language, Fausto puts forward ideas that are very similar to ours: 'If one prefers to put it this way, the theory of simple production in *Capital* is the "negation of a negation". This being-"negated" of capitalism that is its appearance, appears here as a positive being: the negation that it is subjected to is "negated" here. The object of part I of *Capital* is therefore somehow capitalism with its signs inverted, but "inverted signs" refers here less to the operation of "negating" that which is positive but to the operation of positing that which is in fact "negated".'

12. Ideology seems to be more about 'conserving' than 'eliminating' the operation of *Aufhebung*.

simple circulation. But the fact that simple circulation hides and conceals this time does not voluntarily say anything about its origins, this is part of its nature and essence. This is why the presentation and the analysis of the 'surface' are as necessary as its critique. If, therefore, the categories of simple circulation are, as it were, those of the 'surface', the issue becomes that of the objective 'surface' of capitalism, of its own determinations that the same capitalism will contradict and negate but not erase.

To conclude, the object of analysis is indeed capitalism, inasmuch as it is capitalism itself that is reflected and observed in the distorted mirror of its immediacy (first part), in order to discover black spots, inconsistencies, contradictions (second part), and finally return to itself enriched with critical ideas about its own external appearance that, however, it cannot and does not want to modify without distorting itself.

The first part of *Capital* is doubtlessly difficult but clear. It appears to be obscure to all those who refuse to explore the paths of contradiction, too convinced of an unproven and improvable 'a priori'.

Chapter Six

Simple Circulation as a Moment of the Notion

The reader of *Capital* who is interested in the logic of this work finds himself in front of four main theses. Only one of these four theses is correct. This is the thesis that describes the movement of *Capital* as a movement from the abstract to the concrete. It seems to us that we have entirely covered this issue. The three other theses are wrong.

According to the first of these three theses,¹ *Capital* begins with 'capital in general' or general capital, and then moves on to 'particular capital', and ends with 'individual capital'. These three moments correspond to the three volumes of *Capital*. As if capital did not possess all three adjectives at the same time. This thesis raises many problems and does not solve any of them. For example, in what way can constant and variable capital be said to belong to capital in general (examined in the first volume), fixed and circulating capital to particular capital (examined in the second volume), merchant or interest bearing capital to individual capital (examined in the third volume)? For example, is circulating capital not a determination belonging to 'capital in general', in the same way that variable capital belongs to it? And if these three moments, conceived in this way, cannot provide answers to the questions raised by this method, then how are they useful?

1. See especially Dallemagne 1978. This book has been written with this wrong thesis as its starting point. One can find, however, several interesting ideas in it.

According to the second wrong thesis,² *Capital* is a movement going from essence to appearance. If such is the case, *Capital* would not begin with the commodity but with value, from the relations of exploitation rather than from the relations of exchange. How could the commodity be more essential than money, simple circulation more essential than capitalist production?

According to the third wrong thesis,³ (although not to the same extent as the others), the movement of *Capital* is that going from 'Being' to 'Essence' and from 'Essence' to the 'Notion'. These three moments of Hegel's *Science of Logic* correspond to the following three moments of *Capital*: simple circulation, production, reproduction. Why, then, is the commodity of the first chapter of *Capital* accompanied by its essence (value)? Is there not from the very beginning of *Capital* an examination of the foundations of being or of immediacy? Do terms such as 'phenomenal form', used from the first chapter onwards, not introduce us already to a universe posterior to being? Besides, how can this thesis be reconciled with the fact that simple circulation corresponds, as we will see, to the specific moment of the Notion that is the 'chemical relation'? Marx not only organises his thinking within the framework of this relation, but Hegel's influence on this point is also obvious at the linguistic level.

By starting with some additional remarks on 'measure', that we have already encountered in the previous section (see Chapter Four), we will show that the categories of 'being' and 'essence' present in *Capital* do not at all have an autonomous role in this work and cannot have such a role. We will, first, summarily present the great Hegelian triad, and will then present the exact logical position of simple circulation in the conceptual development of capital.

6.1 The great triad of Hegelian logic

Hegel writes that 'the idea of *essence*...is already immanent in measure'.⁴ Indeed, the substrate presents us with notions such as identity (two supposedly commensurable forces), difference (the forces act in opposite directions), and the unity of identity and difference. Hegel develops these notions in the doctrine of 'essence', and they belong to the logic of reflection. The substrate is a set of determinations that cannot belong to its hypothetical 'materiality', to its immediate existence, since these determinations elude the known measurement procedures. This material 'something' that is the substrate, by negating its supposed materiality, determines itself as essence.

2. As put forward by A. Lipietz, among others; see especially Lipietz 1985, p. 11 (a remarkable book, but for other reasons).

3. See Theunissen 1974.

4. Hegel 1989, p. 329.

In the doctrine of 'being', the subject fades in front of the object, while thought follows the self-development of the logical object and identifies with it. 'Being' is the level of observation, more specifically of the simple and formal identity of thought with the object. Thinking [*das Denken*] observes and follows the objectivity of its own methods. The doctrine of 'being' is characterised by the illusory will of the subject, namely, the will to understand the object without mediation or the active intervention of the subject that is reduced to a powerless observer with regards to what is happening to its own self. This is why Jacob Fleischmann⁵ identifies the point of view [*Standpunkt*] of 'being' with that of pre-Kantian dogmatic metaphysics. According to the latter, it suffices to follow being and its determinations in thought [*dem Sein nachdenken*] in order to discover its truth. The doctrine of 'being' leads to a negative result. Truth eludes the object. 'Being' is the point of view of the economist who wants at all costs to discover in the object that which can only exist in the subject's demands to this object. This is an economist who understands well that being as being is foreign to Marxian thought, even if what he says is likely to be nuanced. Lipietz writes the following: 'Positivists might argue against this position [the opposition between a phenomenal world and an essential world, a world of "external connections" and a world of internal relations, exoteric and esoteric], saying that "class struggle" and "wage labour" have no more existence in actuality than the law of universal attraction, and that they merely constitute arbitrary ways of systematizing our perceptions. But if we are to understand Marx, we must adopt his "realist" point of view'.⁶

Not only 'wage labour' and 'class struggle', but also (and all the more so) 'value' and 'capital' are realist and objective systematisations corresponding both to the laws of reason and to reality. Nothing can exist outside reason, apart from an original chaos, which can be called the immediate concrete, the raw fact or 'material' reality. Lipietz's fictional 'positivist' will note the chaotic nature of exchange and no regulatory principle will crystallise, for the 'rule' itself, the 'principle' and the 'universal' are requirements emanating from reason. Lipietz's 'positivist' expresses the point of view of 'being'. One can do without his 'realism' without the slightest danger: but one cannot do without Marx's realism – which is, as we will see, more 'daring' than the realism of essence – since there is no other realism.

'Being' – 'quality', 'quantity' and 'measure' – is the logical moment of the self-negating immediacy, leading in this way to a negative result that is essence. 'Being' is likely to be ontologically 're-baptised', for everything that exists possesses the aspects of the qualitative and the quantitative, and is their unity, that

5. Fleischmann 1964, p. 46.

6. Lipietz 1985, pp. 10–11.

is to say, it is a measure. 'Essence' is 'nothing' at the ontological level. And yet most great philosophical systems since Plato are those of this 'nothing'.

In 'the doctrine of essence' the subject has a more active role. One no longer follows the object, but rather asks the object carefully prepared questions, in such a way as to obtain coherent answers complying with the requirements of reason. The knowing subject thinks about the object. The moment of 'reflection' or 'essence' is characterised by a constant dualism between being and essence. It is the moment, in logic, of the splitting of thought [*Gedanke*] into these two inseparable and yet separated poles. The term reflection in its pragmatic meaning is an illustration of this moment: the two figures are identical and non-identical at the same time, since they are facing each other.

The same dualism between the pole of reflexive existence and the pole of immediate existence can be found in economics. *Capital* is replete with this dualism: surplus-value/profit, value/price, value of the labour force/wage, and so forth. In logic as well as economics, it is very difficult to distinguish the two figures that are at the same time identical and non-identical. Profit is perceptible, in the current account, whereas surplus-value is only visible to the eyes of the mind.

In Marx, as in Hegel, thought embarks upon a perpetual movement between essence and the phenomenon, and it turns out that the most important aspect is their relation. Essence must explain the phenomenon. However, this dualism, on its own, does not explain everything. It produces a splitting into two of categories where the immediate and the reflexive existence must exist together and must form a unity. The reflexive logic is that of 'duty' [*des Sollens*]. The language of reflection is, however, incapable of creating this unity, which is nothing other than the Notion. Platonic philosophy unquestionably expresses better than any other this tension, for it hides it less than other philosophies. On the one hand, the idea (or essence) is conceived in Platonic philosophy as being stable; on the other, the phenomenal world is conceived as being fluid and random. It is the case, therefore, that some 'things' are stable and eternal, while others are fluid and mortal. As a result, there is a relation between these two poles, even if only a relation of opposition. It is, therefore, clear that phenomena are essential to ideas, for it is their opposition that produces an additional important idea, which is that between the stable and the fluid there exists a necessary and logical relation. The eternity of ideas is already disrupted, for it turned out that phenomena contribute to the birth of ideas and that these ideas are not, in principle, independent from the former. 'But if the explicanda [the phenomena] are as essential as their explanation, what has the explanation by means of ideas provided us with, if not a simple split incapable of grasping its own *raison d'être*?'.⁷ It is, moreover, this question that is at the origin of the fact that certain

7. Fleischmann 1968, p. 49.

consistent economists (Boyer, for example) reckon that they 'can live without a law of value'. Their 'agnosticism' with respect to the issue of value expresses an absolutely legitimate philosophical doubt over the issue of knowing whether the dualism of reflection does not complicate things more than it explains them. We will have the opportunity to return to this in the last chapters of this study. Agnosticisim is not the solution.

The act of going beyond the reflexive dualism is nothing other than the Hegelian Notion [*der Begriff*], the last moment in the great triad of the *Science of Logic*, a moment that particularly interests us: not only because it enables a rich reading of *Capital*, but because it enables, at the same time, a rich reading of the capitalist economy.

Aristotle is much more than the greatest philosopher of antiquity:

The meaning of the Hegelian objections [to the logic of reflection]... is the same that one finds in Aristotle, the sole witness that the idea and the phenomenon are identical and non identical at the same time, which literally means that only thought is the reality of this process and not some ordinary ontological distinction: there is no ontological 'object' that can be at the same time identical and non identical to itself. This example shows that the reality of thinking [*das Denken*] as a process is one of the great discoveries of Aristotle whose rich possibilities are amply exploited in Hegel.⁸

The attempt has often been made to prove Marx's 'Hegelianism' on the basis of the doctrine of essence. Such attempts are wrong from the very outset, and this is the least one can say about them. In Hegel, there is not a positive doctrine of essence, but rather a critique of it. The great originality of Marx, in comparison to all other economists before and after him, is that, like Hegel, he speaks the language of the Notion. Both 'essence' and 'being' are present in his work, but these determinations are integrated and subjected to the language of the Notion as early as the first part of *Capital*. Moreover, in Hegel, being and essence do not disappear in the Notion either. The latter designates the moment of the liberation of thinking from all external objects. No logical determination comes from an ordinary external object or from a thought about this object, but from thinking itself that is capable of self-development and of producing its own contents. This thinking, the Notion, finally discovers that there are no other cities for it, that 'home' is not an 'elsewhere'. This assertion – shocking for those who confuse dialectical materialism with who knows what vulgar monster – should be enough for now. We will have the opportunity to develop this assertion in detail throughout the present work. We hope to convince the reader that the

8. Fleischmann 1968, pp. 49–50.

Notion defined in this way is of great practical use in understanding the capitalist economy.

The Notion is the triumph of the subject on the external object. This is the reason why the doctrine of the Notion is the doctrine of the 'subjective logic'. We will have the opportunity to qualify this statement. The philosophy of essence has transformed immediate existence into reflexive existence, the 'objective' world into thought. Hegel took the latter and made it the object of thinking that finally discovers itself as its true object. The 'doctrine of the Notion' or the 'subjective logic' includes, in the *Science of Logic*, three sections entitled 'subjectivity', 'objectivity' and 'Idea'.

Firstly, in the section on subjectivity, Hegel shows that the Notion includes three moments; the moment of universality, the moment of particularity, and the moment of singularity. Secondly, Hegel analyses the forms of 'judgment'. The third chapter of this section, entitled 'Syllogism', is very important for us because, as we will see, capital is nothing other than a social syllogism. Syllogism is the highest point reached by the Notion in the sphere of 'subjectivity'. It is equally present in the other sections of the doctrine, for, in Hegel, everything that is logical is a syllogism.

The passage from 'subjectivity' to 'objectivity', in the framework of the 'subjective logic', can appear very paradoxical. In reality, it is not. In the first section, the Notion shows itself to be perfectly capable of developing itself without the assistance of external objects, whatever their nature might be. It results in a syllogistic system (a totality), a system of determinations enjoying, in a certain way, its own perfection. Immediately, however, a doubt emerges. What is the guarantee that this system is not simply an illusory construction? How can one verify its objective validity? This requirement of objectivity is a requirement of thinking that is therefore constrained to go further. Here, our attention turns to the following question: what is this system of determinations lacking that would enable it to consider itself as real, existing and objective, and not only as subjectively 'thought'? Thinking, thus, turns towards the 'objective world'; not, obviously, in order to materially create it (a ridiculous idea: every child knows, without having studied Kant, that in order to have a hundred real thalers it is not enough to simply imagine them), but in order to put its own claim to the test of 'practice': being the source of every logical determination. Thinking must prove itself capable of creating not the 'objective world' but only its logical determinations, of understanding it.

The second section, 'objectivity', includes three chapters: 'mechanism', 'chemism', and 'teleology'.⁹ Each chapter is a stage of increasing wealth in the

9. On Hegelian teleology, see D'Hondt's contribution in D'Hondt 1970, entitled 'Téléologie et praxis dans la Logique de Hegel'. In the dialectic of the master and the

development of the ‘objectivity’, in that each moment is more complete and less dependent on external conditions than those preceding it. This development will finally result in the ‘Idea’.

The ‘Idea’, finally, constitutes the unity of the ‘subjectivity’ and the ‘objectivity’. It is the correspondence of the reality and the Notion, which corresponds to one of the fundamental theses of Hegelian philosophy according to which the world, in its truth, is the ‘Idea’. The Idea is not, it seems to us, of an objective or a subjective nature. It is rather, very simply, truth as such. We will see (in Part Two, Section One) that the social syllogism, or capital, fits into the logical category of the ‘Idea’.

6.2 Simple circulation as a ‘chemical process’

There is not the slightest doubt that ‘simple circulation’, in Marx, owes a lot to the Hegelian doctrine of the ‘Notion’. The second section of the latter doctrine titled ‘objectivity’ in the *Science of Logic* is titled ‘the object’ in *The Encyclopaedia Logic: Part 1 of the Encyclopaedia of the Philosophical Sciences*. In both works the reader finds three moments of thinking devoted successively to ‘mechanism’, to ‘chemism’ and to ‘teleology’. What interests us at this point is the second moment.

If one wants to understand the exact logical meaning of simple circulation, one has to look to the *Science of Logic*. The chemical object differs from the mechanical object in that the former’s ‘determinateness’ [*Bestimmtheit*], as well as its relation to other objects, is not external to its nature, but rather inherent to it.¹⁰ For example, the prehistoric commodity of barter exchange is a mechanical formal object, in that it is used as a ‘lever’ that exercises a pull on the potential buyer. The object itself is not inhabited by the will to exchange, and the latter is not the object’s distinctive “‘determinateness’, since the product only accidentally becomes a commodity. By contrast, the commodity of simple circulation mediated by money and produced for the market is a ‘chemical object’, in that its ‘determinateness’, its exchange relation, belongs to its distinctive nature, and this nature cannot be conceived of outside this relation.

Hegel writes that in the chemical process, the Notion of the object is in contradiction with its isolated existence, and the object itself is the tendency towards the elimination of its isolation.¹¹ It is attracted as a result of its own conceptual nature towards other objects of the same type. The chemical objects can only

slave, such as it appears in this article, capital, one could say, is the master and the worker is the slave.

10. Hegel 1989, p. 727; Hegel 1969b, p. 429.

11. Hegel 1989, p. 728; Hegel 1969b, p. 430.

remain separated by virtue of 'an *external compulsion*'.¹² The unity of our objects is something that did not exist in the past; it is a 'neutral product' that is not this or that object, but is instead their posited and realised Notion. These objects are originally separated, despite having to form a unity, according to their Notion. The chemical process thus appears as a process (syllogism) comprising three terms. Two of these terms are extremes, whereupon a mediation takes place between them:

Now the middle term whereby these extremes are concluded into a unity is first the *implicit* nature [*die ansichseiende Natur*] of both, the whole Notion that holds both within itself. Secondly, however, since in their concrete existence they stand confronting each other [*da sie in der Existenz gegeneinanderstehen*], their absolute unity is also a still formal element having an *existence distinct* from them – the element of *communication* in which they enter into external *community* with each other.¹³

One can comment on this passage with the help of an example coming straight from simple circulation. The latter effectively comprises three terms, between which a mediation takes place. The two extremes of this syllogistic process are the two particular commodities. What is the mediating element if not, firstly, the exchange-value, the Notion that contains in it the two extremes? Secondly, what is this middle term, absolute unity of the two commodities, which, however, exists next to them, if not money – the expression of value, of the *ansichseiende* nature of the commodities?

The philosopher goes on to say that the 'neutral product' presupposes the difference of the two extremes, the 'tension' [*Spannung*] existing within each object (because of its immanent tendency to eliminate its isolated existence). It does not posit it. Thus, in the neutral product, the chemical process is extinguished. The chemical process turns out, in this way, to be a process incapable of resting upon itself:

'The process does not spontaneously re-kindle itself, for it had the difference only for its *presupposition* and did not itself *posit* it'.¹⁴

'The chemical process is still a finite, conditioned one.... In the neutral product the process is extinct, and what stimulated it falls outside of it'.¹⁵

This contradiction forces 'thinking' to abandon chemism in favour of a superior relation, which is that of teleology.

12. Hegel 1989, p. 728; Hegel 1969b, p. 431.

13. Hegel 1989, p. 729; Hegel 1969b, p. 431.

14. Hegel 1989, p. 730; Hegel 1969b, p. 432.

15. Hegel 1991b, p. 279; Hegel 1970e, p. 358.

This is, summarily and somewhat superficially, 'Hegelian chemism'. But what is the relation between this slightly odd language and the Marxian theory of simple circulation? In the preparatory works for *Capital*, this relation appears in an exceptionally explicit manner: 'Looked at in itself [simple circulation], it is the mediation of presupposed extremes. But it does not posit these extremes'.¹⁶

*Circulation therefore does not carry within itself the principle of self-renewal. The moments of the latter are presupposed to it, not posited by it. Commodities constantly have to be thrown into it anew from the outside, like fuel into a fire. Otherwise it flickers out in indifference. It would die out with money, as the indifferent result which, in so far as it no longer stood in any connection with commodities, prices or circulation, would have ceased to be money, to express a relation of production; only its metallic existence would be left over, while its economic existence would be destroyed.*¹⁷

These passages have nothing mysterious on condition that one is familiar with their logical framework. They do not necessitate any further commentary, for this commentary is Hegelian 'chemism'. Money is the 'neutral product' of the process of exchange, or, as Marx writes, 'just as exchange value, i.e. all relations of commodities as exchange values, appears in money to be a thing'.¹⁸

Marx also studied Hegel's *Philosophy of Nature*. His vocabulary reminds the reader of the vocabulary of the paragraphs devoted to the same subject in the *Philosophy of Nature*.

Many ideas can be found in the preparatory works for *Capital*. These ideas are sometimes incompatible. Some are abandoned and others are developed in *Capital*. Simple circulation as a 'chemical process' belongs to this latter category. The same ideas that one finds in the *Grundrisse* reappear in *Capital* in a more refined and detailed form, but they are less marked by Hegelian language. Far from being a disadvantage, this is actually an advantage.

But Hegelian language does not completely disappear. As in the *Grundrisse*, Marx notes in *Capital* the 'shortcoming' of simple circulation, namely, that it does not carry within it the principle of its renewal:

Of course, if the weaver, having bought the Bible, sells more linen, money comes back into his hands. But this return is not a result of the circulation of the first 20 yards of linen; that circulation rather removed money from the hands of the weaver and placed it in those of the Bible-pusher. The return of

16. Marx 1973, p. 255.

17. Marx 1973, pp. 254–5.

18. Marx 1973, p. 254.

money to the weaver results only from the renewal or repetition of the same process of circulation with a fresh commodity, and it ends in the same way as the previous process.¹⁹

Like Hegel,²⁰ Marx criticises the abuse of mechanical explanations of realities that are not reducible to mechanism. He criticises Say's law of markets on this basis. For Say, money is more of a technical means facilitating exchange, a thing that maintains external relations with commodities. Marx argues that supply cannot automatically create its demand, since money – the form of manifestation and the matter of abstract social labour time – divides in space and time the dual act of selling and purchasing commodities. Money can be stocked:

The buyer has the commodity, the seller has the money, i.e. a commodity which remains in a form capable of circulating, whether it reappears on the market at an earlier or later date. No one can sell unless someone else purchases. But no one directly needs to purchase because he has just sold. Circulation bursts through all the temporal, spatial and personal barriers imposed by the direct exchange of products.²¹

The direct exchange of products, far from being the adequate form of exchange, leads to something entirely new arising. This something is money, the 'neutral product' of exchange, the reified form of a social relation that is born at the same time.

Thus, the 'antithetical phases of the metamorphosis of the commodity are the developed forms of motion of this immanent contradiction'.²² The crisis is already present in the form of a possibility: 'These forms therefore imply the possibility of crises, though no more than the possibility. For the development of this possibility into a reality a whole series of conditions is required, which do not yet even exist from the standpoint of the simple circulation of commodities'.²³

The original 'tension' found within the commodity acquires its form of movement in the chemical process of circulation. Money is a third term that exists 'outside and next to' the commodity. The possibility of a crisis is already present, but only the possibility. Only 'an external violence' to simple circulation can exploit this possibility. As Marx puts it, the 'simple circulation of commodities... is a means to a final goal which lies outside circulation', whereas 'the circulation of money as capital is an end in itself, for the valorization of value takes place only within this constantly renewed movement'.²⁴

19. Marx 1976a, p. 210.

20. See, for example, Hegel 1991b, pp. 274–5; Hegel 1970e, p. 353.

21. Marx 1976a, pp. 208–9.

22. Marx 1976a, p. 209.

23. Ibid.

24. Marx 1976a, p. 253.

The former is a chemical process, while the latter is a teleological process. The start and end points of this process are now qualitatively identical and differ only quantitatively. Otherwise the whole transaction would not make any sense. Capitalist circulation can therefore be written in the following schema: $M-C-M'$ where $M' - M = \text{surplus-value}$. The relation between Hegel and Marx when it comes to the teleological process is no less surprising: 'End is in its own self the urge to realize itself; the determinateness of the moments of the Notion is externality; but their *simplicity* in the unity of the Notion is inadequate to the nature of this unity, and the Notion therefore repels itself from itself'.²⁵

If the term 'Notion' is replaced by that of 'capital', and if it is specified that its moments are money and the commodity, it would seem that Marx is the author of these lines. 'It [capital] is the unity of the commodity and money, but the unity of the two in movement. It is neither the one nor the other but simultaneously the one and the other'.²⁶

In Marx, capital is the perpetual passage from money to the commodity, and, conversely, the departure that is a return, this permanent change of form in which capital becomes, always anew, what it has already been: the unity of the commodity and money.

It [value] is constantly changing from one form into the other, without becoming lost in this movement; it thus becomes transformed into an automatic subject. If we pin down the specific forms of appearance assumed in turn by self-valorizing value in the course of its life, we reach the following elucidation: capital is money, capital is commodities. In truth, however, value is here the subject of a process in which, while constantly assuming the form in turn of money and commodities, it changes its own magnitude, throws off surplus-value from itself considered as original value, and thus valorizes itself independently. For the movement in the course of which it adds surplus-value is its own movement, its valorization is therefore self-valorization. By virtue of being value, it has acquired the occult ability to add value to itself. It brings forth living offspring, or at least lays golden eggs.²⁷

In this passage, there is probably a sort of background irony. But if there is such an irony, it is to be found in the 'golden eggs' and not in the concept of 'life'. Otherwise, it is not expedient, for it is as (variable) capital that labour-power produces surplus-value. Deep down, there is probably no irony but just a slight surprise or a discrete admiration. For, almost ten years after writing the

25. Hegel 1989, p. 742; Hegel 1969b, p. 447.

26. Marx 1974a, p. 939.

27. Marx 1976a, p. 255.

Grundrisse, it is still the Hegelian Notion that verifies and validates itself in the field of modern economics, a field so remote from Hegel's own concerns.

Capital must be understood as a living organism endowed with a body (use-value) and a soul (value), its own will and logic (profit, expanded reproduction, and so on). It must be understood as a real social subject capable of imposing its rules of the game and its institutions, legislation, law and state – determinations that are neither separate from nor independent of capital, but are, instead, capital's own moments.

To this vitalisation of the social relation corresponds, however, a 'de-vitalisation' of the economic man who is reduced to the condition of a dominated subject, if not to the condition of a prop or a means. Capital decides and man reacts.

The worker is not a subject to which the economy is subjected, but is instead a substance that productive capital feeds off. The worker's subjective aim is situated outside his economic transactions. Labour-power is transformed, through money, into a quantity of use values: C-M-C. The worker sells his or her labour-power in order to satisfy needs, and not in order to resell it. The beginning of the process and its end are not the same. This means, quite simply, that for the worker – but also for the individual in general, independently of the specific social relation – production is not an end in itself, but a means for the satisfaction of human needs. In every other mode of production, the aim of production is the satisfaction of human needs; labour is subjected to man, not man to labour or production. Once more – let us repeat it – it is a specific characteristic of capital's order that social relations dominate man, not a 'value judgment' or 'jargon'. Simple circulation C-M-C is a form in which the shadow of the subordination of the economy to man is always present. However, we will see the details later, C-M-C is a process subjected to the circuits of capital. Besides, it only becomes – historically – socially widespread and generalised under the simultaneous existence of the process M-C-M' and under its domination. C-M-C does not characterise any particular mode of production, it has no autonomous and dominant role in history.

Let us note in passing that this is the basis on which 'alienation' (such as it appears in *Capital*) must be interpreted, where its content differs greatly from that found in the 1844 manuscripts. Labour-power is, in the capitalist mode of production, a substance that in order to become a living thing has to be incorporated, absorbed by an organism in which it becomes an organ. The worker is there only as a prop, not as a subject. His labour-power lives by consuming itself, for, at the same time, it is transplanted from the worker's biological body to the economic body of capital. Alienation, at the level of production, is a real mutilation. But alienation not only concerns the process of production *stricto sensu*. It

also designates the loss of human control on social development. The circulation of labour-power (C-M-C, for example) is directly and obviously subjected to the circuits of capital (let us assume for the sake of simplicity that it is subjected to the circuit M-C-M'. Hence the phenomenon of unemployment, for example).

It is not a metaphor to say that capital is a 'living organism'. 'Living' does not merely refer to biological life, although most times but not always the comparative reference is to the biological organism. In fact, the fathering of surplus-value by value resembles more of a theological birth than a biological one:

But now, in the circulation M-C-M', value suddenly presents itself as a self-moving substance which passes through a process of its own, and for which commodities and money are both mere forms. But there is more to come: instead of simply representing the relations of commodities, it now enters into a private relationship with itself, as it were. It differentiates itself as original value from itself as surplus-value, just as God the Father differentiates himself from himself as God the Son, although both are of the same age and form, in fact one single person; for only by the surplus-value of £10 does the £100 originally advanced become capital, and as soon as this has happened, as soon as the son has been created and, through the son, the father, their difference vanishes again, and both become one, £110.²⁸

These brief remarks on the circulation of capital as capital simply aim to make obvious the difference between simple circulation and capitalist circulation as distinct moments of the Notion. We will return to capitalist circulation, capital's life, for it deserves the maximum attention (see Part Two, Section One).

Hegel's 'chemism' does not just refer to the chemical process *stricto sensu*. In the spiritual domain, according to him, '*language*' is the neutral product, the mediating element.²⁹ The value of commodities is their language and 'the characteristic which objects of utility have of being values is as much men's social product as is their language'.³⁰

We are now in a position to show why the third wrong thesis on the logic of *Capital* is less 'scandalous' than the others. Simple circulation's determinations are the most accessible to the ordinary consciousness, for they constitute the apparent image that capital gives of itself. This is why they are the most immediate laws of the capitalist system. These laws, however, are based on more essential but less apparent relations. The negation of this immediacy reminds us of the passage from 'being' to 'essence'. The chemical process of circulation swims in a

28. Marx 1976a, p. 256.

29. Hegel 1989, p. 729; Hegel 1969b, p. 431.

30. Marx 1976a, p. 167.

self-negating ‘immediacy’, in the same way that ‘being’ negates itself in ‘essence’, the foundation [*Grund*] of existence. These are the ‘mitigating circumstances’ of this thesis.

The ‘immediacy’ of capital is not, however, a moment closer to ‘Being’ in logic, because its determinations correspond to the logic of the Notion and not to ‘quality’, ‘quantity’ or ‘measure’, which are the three moments of the ‘immediacy’ or of the Hegelian ‘being’.

Capital is an unprecedented and monumental work in economic history. This is because in *Capital* the theoretical breakthroughs of the three parts of the *Science of Logic* are not only understood and applied, but are also reworked and combined in accordance with the requirements of the ‘Notion’ and are subjected to it. The ‘Notion’ – final product and valid result of the odyssey of thinking – is the only possible discourse capable of grasping the economic world as a structured and ordained totality, complete and at the same time dynamic and in movement, such as it is in itself and for the mind.³¹

31. We cannot here elaborate on this assertion. The present study only aims to render this assertion obvious. We hope that at the end the reader will be convinced that such a totality is possible and thinkable.

Chapter Seven

The Hidden Time of the Commodity

The process of capitalist circulation distinguishes itself from that of simple circulation by the different order and frequency of their terms. The latter designates the act of selling in order to buy (C-M-C), whereas the former designates the act of buying in order to sell (M-C-M').

Capitalist circulation entails a 'profit', a 'surplus-value'. This constitutes its aim: M-C-M'.

Let us concentrate first on purely commercial capital. The merchant buys a commodity in order to resell it at a higher price, and, in general, he succeeds in doing so. The merchant appears, therefore, as the mediator between a seller and a buyer. If this commodity is sold and bought at its value, from where does the surplus-value derive? A mystery.

Let us temporarily admit that this commodity is not sold at its value. Let us suppose that the seller has the privilege of selling his commodities at a price above their value. The problem would not in the least change because there are no sellers who are not also buyers. What one earns as a seller, one loses as a buyer.

Let us now admit that the buyer has the privilege of purchasing the same commodity at a price below its value. It is obvious that what he would save as a buyer he would lose as seller.

In other words, commercial capitalist circulation is, at the same time, half a simple circulation (C-M) for the seller, and half a simple circulation (M-C) for the buyer – two acts that appear to the eyes of the merchant as M-C and C-M'. And because half and half

are equal to one, the same circulation should allow more value to circulate when it is capitalist (such as it appears to the eyes of the merchant) and less value when it is simple. The same exchanges should be exchanges of equivalents and non-equivalents. Circulation thus contradicts itself: 'The form of circulation within which money is transformed into capital contradicts all the previously developed laws bearing on the nature of commodities, value, money and even circulation itself'.¹

Simple circulation is perhaps an unreliable witness, but it ends up expressing what it knows. It is not the crime scene. Its laws are egalitarian. Merchant capital seems to violate them, but neither the buyer nor the seller appears to be its victim:

The form M-C-M', buying in order to sell dearer, is at its purest in genuine merchants' capital. But the whole of this movement takes place within the sphere of circulation. Since, however, it is impossible, by circulation alone, to explain the transformation of money into capital, and the formation of surplus-value, merchants' capital appears to be an impossibility.²

The circulation of commercial capital is characterised by the same 'shortage' as simple circulation. We have already noted, in the previous chapter, that the latter does not bear the principle of its renewal. The circulation of commercial capital does not do so either. It is the witness of a mysterious time, hidden in the commodity (M'-M = surplus-value), the origin of which it knows nothing about: commercial capital does not bear (either) the principle of its growth.

Commercial capital hides the modalities of its growth because it is simply a derived form of capital in its fundamental form. The moment has not yet come to examine how it is possible that the derived forms of capital – understood here in the strict sense of the term – (commercial and usurious capital) precede it historically. For the moment, it is suitable to put the derived forms of capital into brackets and examine capital in its fundamental form.

The circular movement [*Kreislauf*] of capital presents some similarities with that of commercial capital. Capital abandons its money form to become commodity, and to return finally to its initial form enriched with a 'new shoot'. We will have the opportunity to see that this circuit is only a first approximation of the reality of capital (see Part Two, Section One). It is surprising that many Marxists consider this circuit the adequate form of the movement of capital.

Contrary to commercial capital, industrial capital bears the principle of its renewal and its growth. This is why it is a living organism. Contrary to commercial capital, it acts not only in the sphere of circulation, but also in that of

1. Marx 1976a, p. 258.

2. Marx 1976a, p. 266.

production. Industrial capital produces and throws into circulation as much value as it demands from it.

The money-owner must, therefore, 'buy his commodities at their value, sell them at their value, and yet at the end of the process withdraw more value from circulation than he threw into it at the beginning'.³ This is the problem.

Marx's answer is very clear: while it is consumed, the commodity 'labour-power' produces more than what it costs its buyer. This is the solution.

Can this solution not be 'proven'? Does it really need to be proven any more than Marx proved it? Are there not classes that consume without producing? That all consumption is production is neither a sophism nor the solution to our problem. Unproductive classes consume commodities without producing any. And if there are commodities at their disposal, it is because someone has produced them. By way of elimination, only labour-power can produce more than it consumes.

To suppose that machines produce more value than they consume is to confuse the means of labour with labour itself, the social technique with the social relation, and physics with history. Obviously, no-one contests the fact that advanced machines – under certain circumstances with which we are as yet unfamiliar – can be the source of an increase in profit. However, this is not the issue. Rather, the pertinent question is the following one: how can a technical means, as a technical means, be part of a social relation, of a relation between people? It is as if, in literature, one judged a writer on the basis of the quality of the latter's system of word-processing (this does not mean that this technical means is irrelevant to the evolution of literature). Even if one accepts, for a moment, the absurdity according to which technical means as technical means would produce more value than they consume, why then should certain people or social classes profit more from this happy situation, from this divine gift, than others? And should not the focus of our attention, in this case and since men are equal before God, move from the theological relation to the relation of man to man, to the social relation, abandoning the former to the intelligence of theology and the church? No economic idea is more superficial than the one of the 'three sources of income' and the 'three factors of production' (see especially Chapter Twenty-One).

The hidden time of the commodity is nothing other than the difference between the necessary labour time for its production and the necessary time for the reproduction of the labour-power that produced this commodity. The latter is, as a matter of course, 'necessary' in the historical sense of the word, and not in its physiological sense. Social needs evolve.

3. Marx 1976a, p. 269.

Denis contests the validity of this argument on the basis of an interesting line of thought, albeit one that is, to our mind, wrong. He writes that Marx, after having presented simple circulation as a 'chemical process', now tells us that 'circulation does not create more value than its own magnitude'. According to Denis, this is wrong, for 'if the combination of objects does not produce anything that does not already exist, then we are back to mechanism again'.⁴ However, Marx himself describes (in the same page as that cited by Denis) the new product of circulation and in what sense it is new:

As far as the form of circulation itself is concerned, what emerges and is produced within this form is money itself and nothing else. Commodities are exchanged during circulation but do not emerge in it. Money as price and metallic money [Münze] is, obviously, already a product of circulation but only formally so. Since metallic money is merely the autonomised form of the commodity as a means of exchange which was itself presupposed, price presupposes the exchange value of the commodity. Circulation creates neither exchange value nor its magnitude.⁵

Firstly, what does Marx mean when he says that money is the product of circulation? This means that from effective exchanges there springs forth something that did not exist before, a thing through which commodities relate to each other as values and as quantities of value. This thing is not simply a means but the phenomenal form of a social relation.

Secondly, what does Marx mean when he says that money is only the formal product of circulation? This means that circulation creates the 'necessity' of money, but that it does not create it materially.

Three additional questions arise.

Does the social relation materialise in the sphere of production, or rather in that of circulation? It materialises neither in the former nor the latter, but in both. For there to be value, there must be production for sale and then the product must, indeed, be sold. How could exchange-value exist without market exchange?

Does the quantity of value, for all that, have to be determined both by production and circulation? We have already analysed the contradictions of 'socially necessary labour time', and we will not rehearse them here. Let us simply note that for something to be recognised, it must first exist. If one takes as a fixed point the perspective of the producers, then the quantitative contradictions of value tend to cancel each other out spatially and temporally. Value is only quantifiable through the effect of a difference that appears within it, but this does not

4. See Denis 1984, p. 47.

5. Marx 1974a, p. 926.

mean that circulation and production act in the same way on the quantity of value. In the last analysis, only production determines the quantity of value, by internalising the critique of circulation.

Does this last statement push us back into mechanicism? Does the living organism not have its periods of growth and stagnation, fertility and infertility? Here is the answer.

The capitalist economy is a living reality. This diagnosis is not only that of Denis. It is equally that of Marx, in spite of Denis's doubts. According to Denis, this same diagnosis is not 'compatible with Marx's vision of a market world that is a sort of bad dream for humanity and from which humanity needs to be woken up as soon as possible'.⁶ Why would it not be compatible? This claim seems unfounded. Capitalist reality is a living thing because – among other reasons – it is capable of reacting and defending itself, and because it is capable of self-development, whatever the social price might be.⁷ It is a human reality that escapes human control; it dominates society, subjecting man to its own purpose, and for these reasons is a living thing.⁸

The owner of money finds the worker free on the market, in the same way that one finds cats and dogs in nature. But for there to be a free and developed market, there must also be free workers; free to dispose of their 'labour-power as [their] own property, [their] own commodity', and 'free of all the objects needed for the realization of [their] labour-power'.⁹ However, neither the money-owner nor the owner of labour-power has any natural foundation. Nature does not produce the capitalists on the one hand, and the workers on the other. Both are the product of the violent destruction of past economic forms; they are the two faces of the same historical product.

To sum up, let us note that simple circulation, such as it appears in market circulation, indicates the presence of a hidden time in the commodity. This time, however, does not seem to find a suitable place in simple circulation. Its 'home' is situated elsewhere. To the shortage of simple circulation – a feature it shares

6. Denis 1984, p. 49.

7. Capitalist reality has reached peaks of brutality, with rationally prepared and technically perfected means, peaks that were unimaginable for Marx and for any other thinker of the nineteenth century. 'A long time ago', it is said today, including in Germany. But clocks are abused for measuring, with the help of technique, the time of history. For how long did fascism last – 15 years, or rather 15 centuries? What kind of relation can there be between historical time and natural time? According to which criterion can one put this capitalist period into brackets?

8. Despite the present critique of Denis's work, we want to highlight the fact that his work contributes much to the analysis and understanding of Marx's work. Denis's critique is original and rigorous. Despite the majority of our findings being opposed to those of Denis, we acknowledge that his various works have been a constant source of inspiration for us.

9. Marx 1976a, pp. 271–3.

with every logical phenomenon of the same kind – should be added a mystery: from where does this obscure time arise? As we have just seen, the solution to this mystery resides in the sphere of production. Simple circulation leads to capitalist circulation, and commercial capital leads to industrial capital. Capital in its fundamental form differs from commercial capital inasmuch as it also acts in the sphere of production, at the place where labour appears in its fluid form. Marx does not ‘pass’ from simple circulation to production – as is often claimed – but rather from the ‘chemical process’ to the ‘teleological process’, and from the latter to an initial approximation of the ‘vital process’. This last process differs from the previous moments in that it includes the productive process; between the purchase of labour-power and the sale of reified labour (these acts, when taken separately, are part of simple circulation) production intervenes, about which we know nothing:

Let us therefore, in company with the owner of money and the owner of labour-power, leave this noisy sphere, where everything takes place on the surface and in full view of everyone, and follow them into the hidden abode of production, on whose threshold there hangs the notice ‘No admittance except on business’.¹⁰

In a play, the second act is not really independent from the first. Abstract labour can only be conceived in its relation to circulation. If it is necessary to ‘isolate’, so to speak, the productive process, we need to specify that this ‘isolation’ does not isolate anything.

10. Marx 1976a, pp. 279–80.

Section Three

The Time of the Process of Production

Chapter Eight

The Time of Surplus-Labour or Absolute Surplus-Value

Surplus-value appears first of all as that amount of the commodity's value that exceeds the value of the labour-power consumed during the production of this commodity. This surplus-value is neither absolute nor relative, for these categories only concern the ways in which it grows. Nevertheless, this definition is sufficient to analyse constant and variable capital, and to determine the mass and the 'synchronic' rate (we will return to the meaning of this term) of surplus-value. Then, we will specify the modalities of growth of absolute surplus-value. This will allow us to examine some determinations of the surface such as they appear in the sphere of production.

8.1 Constant and variable capital, mass and rate of surplus-value

Constant capital can be distinguished from variable capital by the way in which it participates in the value of the new product.

Both constant capital and variable capital are necessary to capitalist production. How could one produce without consuming raw and auxiliary materials, labour instruments, machines, buildings, and so on? Yet this does not mean that constant capital participates in the creation of new value. The most diverse and varied objects – from the oxygen in the atmosphere to the state police – are equally necessary for production to happen, without necessarily participating in the creation of value.

In the sphere of production, labour is the mediator through which the value of use-values, which are used as means of production in the sphere of production, is passed on to the product being created. The value of these use-values is maintained in this new product.

The practical businessman knows that his money is not lost with the physical disappearance of the means of production that are productively consumed. In order not to lose the track of this money, the businessman buys a personal computer endowed with a good memory, or, if he does not like the 'new technologies', he meticulously keeps his accounting books. He knows, at any time, how to distinguish the gross value of the new product from its 'added' value. As for value, a purely spiritual reality, he cares little about the body in which it is found.

For the part of capital that, by being productively consumed, conserves its value in the newly created product, Marx gives the name 'constant capital'. It is past labour, that is to say, reified labour.

The productive consumption of constant capital, or the process of the negation of its use-value, is at the same time the process of metempsychosis of its value. Constant capital cannot, therefore, ever transfer to the product more value than that which it possesses itself. Needless to say, this value is always updated; in other words, it is quantitatively determined not on the basis of what constant capital cost when it was bought, but instead on the basis of the cost to replace it.

From the consumption of a part of capital comes a part of the value of the product. What disappears on the one side appears on the other. The other part of the value of the product can only come from that part of the consumed capital that remains. This part is the labour-power whose process of consumption is nothing other than living labour, present in fluid form.

From the consumption of labour-power arises, at the same time as labour, a value that did not previously exist. Therefore, there is no longer a simple transfer of value, but the real reproduction of value by value itself. Marx calls labour-power 'variable capital' when it no longer belongs to the worker but functions as an organ of capital. Variable capital is therefore the process of the negation of the use-value of labour-power.

The consumption of labour-power, or labour, possesses the dual property of conserving the old value of the means of production and creating new value. The conservation of the old value belongs to the properties of concrete labour. It is in his capacity as a spinner that the spinner transfers the value of the brooches and cotton to the products of his labour. Concrete labour transfers the value of constant capital to the product being created. On the other hand, the properties of abstract labour add new value because, in its reified form, abstract labour is value.

The fact that the worker not only produces the necessary equivalent for his own conservation and reproduction, but, moreover, also produces an additional

product destined to the classes that do not perform any labour, is a condition *sine qua non* of capitalist production. At our present juncture, we only know of one class that does not work. One can always debate the notion of labour and the issue of knowing under what conditions the capitalists can be said to (productively or unproductively) work or not work. In any case, there exists no proportionality or rational relation between the 'personal labour' of a businessman and the mass or the rate of his profit.¹

This additional product that Marx calls 'surplus-product' (when he emphasises its material aspect), or 'surplus-value' (when he emphasises its value), comes from the difference between the exchange-value of the labour-power and the value newly created by the productive consumption of the use-value of this power.

The worker works, therefore, a part of the day in order to reproduce the equivalent in value of his labour-power. The other part of the value has, for the capitalist, 'all the charms of a creation *ex nihilo*'.

To the labour time necessary for the production of the commodity, one must now add the labour time necessary for the production of the labour-power. The former contains and is greater than the latter. Their difference is called 'surplus labour time'.²

The capital advanced (Va) can be broken down to constant (C) and variable capital (V). The rate of surplus-value (synchronic, not annual) is the relation of the mass of surplus-value (s) to the initial value of the consumed variable capital (v): s/v . If we call s' the mass of surplus-value produced by an individual worker (with average skills and working at an average intensity of labour), v' the capital advanced to pay the worker, s the mass of surplus-value produced by all the workers, v the variable capital spent to buy the labour-power, a the time of surplus labour, a' the necessary labour time, n the number of workers, and alp the average labour-power, we obtain the following two formulas:

$$s = \frac{s'}{v'} \cdot v \quad \text{and} \quad s = alp \cdot \frac{a'}{a} \cdot n$$

The synchronic rate of valorisation of capital (pr) is equally easy to calculate. It is the relation of the mass of surplus-value, produced during any given period, to the constant capital (c) and to the variable capital (v) productively consumed during this same period:

$$pr = \frac{s}{c + v}$$

1. On the issue of the 'rational' and 'irrational wage', see especially the interesting analysis of Nadel 1983.

2. Marx 1976a, p. 325.

The rate of valorisation of capital (the rate of profit) must also be calculated not on a synchronic basis but rather on a diachronic or annual basis; in other words, not on the basis of the value productively consumed but on that of the value of the advanced capital. What is the annual rate of profit? Marx explicitly postpones the answer to this question:

Of course, the ratio of surplus-value not only to that portion of the capital from which it directly arises, and whose change in value it represents, but also the sum total of the capital advanced, is economically of very great importance.

We shall therefore deal exhaustively with this ratio in our third book.³

Marx, a typical example of ‘Germanic meticulousness’, deals with the behaviour of the value of industrial refuse⁴ in detail, but does not deal with this essential question. He has very good reasons for doing so. Of course, if one knows the mass of surplus-value produced daily, one can calculate the annual mass of surplus-value (S) and relate it to the value of the capital advanced: $Pr(\text{annual}) = S/(C + V)$. However, the capital advanced, and the capital annually consumed, are two quantities connected by a necessary relation about which nothing can be said for the moment. Moreover, as we will see later when dealing with the time of circulation of capital, the formula ‘ $S/(C + V)$ ’, so often used without precision, is to Marx’s eyes an incomplete and problematic formula.

To be able to calculate the rate of profit in an exact and rigorous manner, the notion of ‘turnover of capital’ must first be introduced. This notion entails the concepts of ‘fixed’ and “‘circulating’ capital. Next to the time of production, which is linear, one must introduce the time of circulation, which is the object of the second volume of *Capital*.

Fixed and circulating capital are not, therefore, determinations that should be added to constant and variable capital, but are instead determinations based on these latter concepts. They constitute, at the same time, their concretisation. The relations that link constant and variable capital on the one hand, and fixed and circulating capital on the other, are not external but necessary. Neither the former nor the latter can be based on themselves, and both can only really be understood in and through their relation. The notions that refer to the production of value (the ‘essential’ notions) need foundations.

The notions of ‘constant capital’, ‘variable capital’ and ‘surplus-value’ are strictly reserved for not only the process of production, but also the temporality of production. It is this linear and abstract temporality, which has two dimensions (the past and the present), that characterises and specifies them, for the

3. Marx 1976a, p. 323.

4. Marx 1976a, p. 313.

notions of 'fixed' and 'circulating capital' are also reserved for the process of production, at the same time as they are part of the temporality of circulation.

Constant capital and variable capital are abstractions, notions. On their own, they are insufficient, in the same way that the nervous system of any organism is unthinkable unless considered in its relation to the other organic systems of the same living individual.

Expressions such as the 'circulation of variable capital' or the 'circulation of constant capital' are not wrong and can be used as abbreviations, on condition that one does not forget that the former circulates as part of circulating capital, and the latter as fixed capital and as part of circulating capital. If one forgets this, these expressions become completely meaningless.

We will return to these questions later and deal with them in detail. For the moment, we think it is crucial to recall that we are in the presence of a temporality that only knows the present (living labour) and the past (labour realised in the form of constant capital). This temporality is, as a result, linear.

The attempt to determine constant and variable capital involves certain categories belonging to the time of circulation. However, the temporality of circulation concerning the turnover modes of value is necessarily based on this value. The production of value logically precedes its circulation. Constant capital and variable capital logically precede fixed capital and circulating capital. The order of exposition in *Capital* is neither accidental nor arbitrary, but logical and conceptual.

Some critical commentators on *Capital* would prefer production to precede simple circulation. Others would like to introduce competition in the first section of *Capital* and in production itself; and there are many more proposals of this type. Some commentators even take the liberty, in a didactic tone, of advising or 'correcting' Marx in order to somehow save him from his own dialectical flaws. How can one start from the process of production without a prior analysis of the commodity, value and money? Capitalist production is what it is because it is organically linked to these latter categories: what is abstract labour without the value-form, money or the commodity? And how can one introduce competition in an explicit and developed way (for implicitly it is omnipresent) in simple circulation or production, without having already analysed surplus-value, constant and variable capital, turnover time, fixed and circulating capital, profit and the rate of profit, and many other determinations to which the 'laws of the market' owe their intelligibility? Perhaps there were other possibilities concerning the logical order of exposition in *Capital*, but its author has made his choice, and this choice is a very good one. Instead of 'correcting' him, giving him lessons or attempting to 'save' his own method, it is better – first – to understand his dialectical method, with which many commentators on *Capital* have only a superficial relation.

8.2 The working day

Productive time is a linear time. It is Marx himself who says as much:

Let us assume that a line A ———— B represents the length of the necessary labour-time, say 6 hours. If the labour is prolonged beyond AB by 1, 3 or 6 hours, we get three other lines:

Working day I: A ———— B — C

Working day II: A ———— B ——— C

Working day III: A ———— B ———— C

which represent three different working days of 7, 9 and 12 hours. The extension BC of the line AB represents the length of the surplus labour.⁵

We are obviously not quoting this passage simply to highlight the linear character of the time of production. This passage will prove useful in order to introduce the theoretical status that social conflict and regulation have in Marx concerning the working time.

These three lines show first of all the flexibility of the working day. This flexibility is relative, that is, working time only varies within certain limits. The prolonging of the working day produces absolute surplus-value. If one assumes, for the moment, that AB has a constant length, it is obvious that in the framework of capitalist production BC must be logically greater than zero. It is, however, impossible to rigorously determine this minimum limit. There equally exists a maximum limit. The worker cannot work 24 hours per day because this is physiologically impossible.

Between these two extremes, every variation in the length of the working day is possible. The principle that governs it is the divergence of interest between the social classes and their respective forces.

In Marx, this balance of forces is not situated outside the exploitation relation, for it is one of its essential regulatory principles.

If variable capital does not produce enough offspring, the capitalist appeals to the laws of exchange. He bought a commodity and wants, like any other buyer, to consume it as he sees fit and for as much time as he wants.

The consumption of labour-power is, however, labour. The worker has strong arguments for contesting the rights of the buyer. He will therefore tell him:

What you gain in labour, I lose in the substance of labour. Using my labour and despoiling it are quite different things. . . . You pay me for one day's labour-power, while you use three days of it. That is against our contract and the law of commodity exchange. I therefore demand a working day of normal length, and I demand it without any appeal to your heart, for in money matters senti-

5. Marx 1976a, p. 340.

ment is out of place... [B]ut the thing you represent when you come face to face with me has no heart in its breast. What seems to throb there is my own heartbeat. I demand a normal working day because, like every other seller, I demand the value of my commodity.⁶

The capitalist and the worker take on the roles of buyer and seller with respect to each other, and they are equal before the law. Each one defends his legitimate rights:

Between equal rights, force decides. Hence, in the history of capitalist production, the establishment of a norm for the working day presents itself as a struggle over the limits of that day, a struggle between collective capital, i.e. the class of capitalists, and collective labour, i.e. the working class.⁷

Some superficial readers of *Capital* believe that in Marx there is a clear and sharp distinction between the 'base' and the 'superstructure', to which they attach an excessive autonomy, or, worse still, they believe that the latter is determined by the former in a mechanical way.

One can see, however, in the passage quoted above, that this famous 'superstructure' – law, regulation, representation [*Vorstellung*] – penetrates the intimate sphere of the capitalist mode of production, its 'forbidden city', the 'secret basement' of production, in order to play a decisive and active role, namely, to regulate the rate of exploitation of labour-power. We can really not see through which mysterious force the juridico-institutional 'edifice' can be said to superimpose itself on an economic 'base', that is, on the social relations of production, for this 'edifice' is, at the same time, a foundation. Capitalism without legal equality, without its abstract laws and its morality, its illusions and its rules of the game, its police and its state, is either imaginary or it is not capitalism. Here are the 'surface' and the 'foundation', the relation of the exchange of equivalents and the relation of exploitation, their roles having been turned upside down: the 'foundation' superimposes itself on the 'surface' and the surface becomes the basis of the foundation.

Similarly, abstract labour and surplus-value cannot purely and simply appear in the sphere of production, for it is precisely in the enchanted world of universal exchange that the worker finds himself endowed by nature with an alienable substance of his own body and soul, with a labour-power whose value is purely commercial. The exchange of labour-power for money as a regular and peaceful phenomenon presupposes a certain relation of the worker to himself, a personal

6. Marx 1976a, p. 343. Marx paraphrases in this way a petition by the committee of construction workers in London, demanding the nine-hour day. The petition must have appeared around 1860–1.

7. Marx 1976a, p. 344.

and social schizophrenia, namely, that his individual substance should be external to the worker, a thing just like any other that can be sold. The worker does not need to defend himself. He needs, like any other seller and buyer, to defend his commodity, his 'private property'; he is 'free' to 'bring himself' to the market and sell himself at a good price. He is 'equal' to his buyer, both of them being 'sellers' and 'buyers'.⁸

No-one doubts that Marx himself is, due to his occasionally excessive preoccupation with simplification, partly responsible for his poor readers, especially when one thinks of his 'preface' to the *Contribution to the Critique of Political Economy*,⁹ or one of the letters against Proudhon.¹⁰ However, as he himself said, he takes for granted that his readers think for themselves and this is enough to appreciate the scientific value of some of his particularly provocative simplifications in these polemical texts.

Speaking of the determination of the working day, Marx writes of 'moral' limits.¹¹ Simply the use of this term proves that the notions of the 'base' and the 'superstructure' must be used with caution, for Marx does not like 'innocent' linguistic usages. This 'morality' is the product of a dual negation. Capital's immanent tendency to prolong the time of surplus-labour up to the physiological limits of the day, the tendency to temporally extend the negation of man who becomes, in the sphere of production, both consumable commodity and the medium of a foreign organism, is frustrated, moderated and negated by the reaction of the working-class that draws its legitimacy from the sphere of circulation. The violence resulting from this conflict is foundational of a 'morality' that, in another form, is often regulation and law. This 'edifice' plays an active, decisive and essential role in the development of capitalism. It is not determined by the social relation, but merges with it.

The 'superstructure' penetrates the sphere of production. The latter, on its part, not only produces value and surplus-value, but also participates in the production of the representations and ideology that are equally essential to the proper functioning of the system. As Marx writes, in the capitalist mode of production 'surplus-labour and necessary labour merge into one another'; the commodity hides the surplus labour time, whereas the *corvée* says what it is: 'The necessary labour which the Wallachian peasant performs for his own maintenance is distinctly marked off from his surplus labour on behalf of the boyar. The one he does on his own field, the other on the seigniorial estate'.¹²

8. On this point, see Lukács 1971.

9. Marx 1970, pp. 19–23, and in particular pp. 20–2.

10. Marx and Engels 1968, pp. 629–38.

11. Marx 1976a, p. 341.

12. Marx 1976a, p. 346.

The 'ideological apparatuses', the publicity of certain ideas and certain values to the detriment of others, are much less responsible for 'false consciousness' than they have usually been considered. 'False consciousness' has very deep roots, going all the way back to the process of production of capital.

What is surprising about the capitalist mode of production is not that it changes, but that it stays the same despite changing. The flexibility of working hours is, without the least doubt, one of the most important issues of the current economic crisis. Marx analysed the advantages of this flexibility for capital more than a century before this crisis:

Constant capital, the means of production, only exist, considered from the standpoint of the process of valorization, in order to absorb labour and, with every drop of labour, a proportional quantity of surplus labour. In so far as the means of production fail to do this, their mere existence forms a loss for the capitalist, in a negative sense, for while they lie fallow they represent a useless advance of capital. . . . Capitalist production therefore drives, by its inherent nature, towards the appropriation of labour throughout the whole of the 24 hours in the day. But since it is physically impossible to exploit the same individual labour-power constantly, during the night as well as the day, capital has to overcome this physical obstacle. An alternation becomes necessary, between the labour-powers used up by day and those used up by night. This can be accomplished in various ways.¹³

There has been a considerable development since the beginning of the current structural crisis of work organised in successive shifts. If we limit ourselves to capitalist Europe, we can observe the same tendencies in both the most¹⁴ and the least¹⁵ developed countries.

As far as bank holidays and Sunday work is concerned, the same phenomena as those of Marx's time can be observed today. Sunday work – except the work carried out in the service of capital – was prohibited at the time in England. Thus, the same worker could be punished for having worked on a Sunday on his garden or for not having gone to work in the factory (breach of contract).¹⁶

Thus, in the religious Germany of the late 1980s, while any Sunday leisure resembling work was considered disapprovingly, there was a serious discussion about the extension of Sunday and bank-holiday work to those fields of activity previously cordoned off from it by law. The Church, which worried about the

13. Marx 1976a, p. 367.

14. See Leithäuser 1986.

15. See Panagiotides 1987–8. One finds in this study a very detailed description of methods of shift work, of bank holiday and Sunday work, as well as significant numbers about the evolution of these phenomena in Greek industry since the crisis.

16. Marx 1976a, p. 375, n. 72.

salvation of the believers' souls, supported the trade unions' response. The employers' organisations, however, more interested in qualming capital, did everything they could to convince public opinion of the 'imperative social necessity' of Sunday work. The magic word, the 'catch-all' argument, was, of course, international competition that threatened the trade surplus of the Federal Republic of Germany.

Poor countries (in order not to get poorer), rich countries (in order to grow richer), and both poor and rich countries (in order to improve their balances), refer to the same laws of competition, making use of the same mass-produced arguments. They are even right to talk of 'external necessity'. Marx knew only too well what he was saying, over one-hundred and forty years ago: 'Under free competition, the immanent laws of capitalist production confront the individual capitalist as a coercive force external to him'.¹⁷

On the other hand, if there is a necessity, this is capital's necessity to be profitably deployed and not any 'social necessity'. Capital's progress and social progress are two entirely different things and they are often opposed. Marx also knew this quite well:

Capital therefore takes no account of the health and the length of life of the worker, unless society forces it to do so. Its answer to the outcry about the physical and mental degradation, the premature death, the torture of over-work, is this: 'Should that pain trouble us, since it increases our pleasure (profit)?'.¹⁸

'Premature death', 'physical degradation', and so forth, are expressions that can doubtlessly give rise to ironic comments. Developed modern capitalism, it is said, is far from being so inhuman. However, the radical separation between economic and social progress has never been so obvious as in our present time. The era of micro-electronics seems to be perfectly compatible, not to say inseparable, from the new poverty in the developed world (thirty-five million poor in the United States alone). No-one doubts that the living conditions of the working-class have, regardless, been significantly improved in certain developed regions. This is not the result of a mysterious 'market social economy', which is a meaningless expression; rather it results from the balance of forces between the classes and the gains made by the labour movement, or, as Marx would put it, the 'social constraint'.

In the current conditions, there is no such thing as a good flexibility of labour for society. Flexible hours can only lead to a reduction of the control exercised by the worker on his free-time and to an increase in unemployment.

17. Marx 1976a, p. 381.

18. Ibid. The quoted sentence is Goethe's.

There is no other idea standing further from what Marx said than the attempts to find a working day that would satisfy both parties. Marx explicitly opposes to the idea of 'compromise' and the 'national interest' the interests of the working-class and society. After a short account of the struggle for the normal working day of the second quarter of the nineteenth century in England, and the repercussions the English legislation had on France and the states of North America, Marx sums up in the following way:

[the] workers have to put their heads together and, as a class, compel the passing of a law, an all-powerful social barrier by which they can be prevented from selling themselves and their families into slavery and death by voluntary contract with capital.¹⁹

This way of looking at things is rich in lessons and remains as relevant today as it was in Marx's time.

19. Marx 1976a, p. 416.

Chapter Nine

The Time of Surplus-Labour or Relative Surplus-Value

Relative surplus-value can be distinguished from absolute surplus-value by the modalities governing the increase of surplus labour time. The former does not come from the extension of the working day, but from the reduction of the necessary labour time. We are therefore dealing with a working day whose length is supposed to be fixed but whose constitutive parts are variable. As in the previous chapter, the working day can be represented by a line:

A — — — — B — — C.

Necessary labour time is represented by AB, and surplus labour time by BC. Relative surplus-value, therefore, comes from the shortening of AB, which at the same time is the extension of BC, which can be represented by the following line:

A — — — — B' — B — — C.

The shortening of AB to AB' can only be due to a reduction in the value of labour-power, that is to say, a reduction in the socially necessary time for the production of commodities destined – either directly as final commodities, or indirectly as intermediary commodities – to working-class consumption. This reduction entails, in general, an increase in labour productivity. However, it can equally result from a change in the balance of forces to the detriment of the working-class, a possibility that we will set aside for the moment.

An increase in labour productivity means increased material production without an extension of labour time, or, if we prefer, time saving. It is therefore not surprising that the guiding principle of the fourth part of *Capital*, devoted to the production of relative surplus-value, is nothing other than the capitalist saving of labour time and its social price.

What is, however, surprising is the detailed description of certain phenomena and their theoretical analysis at a time when they still existed at an embryonic stage. It is not at all an exaggeration to claim that the principles of the organisation of labour that would later on be declared 'scientific' are already present and analysed in the fourth part of *Capital*.

9.1 Simple cooperation and the saving of time

Labour in capitalism has always been co-operative, namely, several workers, subjected to the authority of the same master, working together with a common aim.

The co-operative form of labour is at the origin of two types of saving of labour time that need to be briefly examined, for they have played a considerable role in the development of capitalism.

Firstly, with regard to the saving of labour time let us note the economies of scale in constant capital. The concentration of several workers under the same roof obviously gives rise to an increase in the value of constant capital. The value of the instruments of labour, machines, buildings, and so on, increases together with the increase in the number of workers employed. However, the construction of a workshop and its equipment for a given number of workers is less expensive than the construction of several workshops for the same number of workers. The collective consumption of the use-value of the means of production is accompanied by a relative reduction in their value. A bigger concentration of constant capital will mean a greater saving of working time in constant capital and a smaller unit-value for the produced commodities and for labour-power. If we take a closer look, this saving arises not from the co-operative form of labour, but from the simple collective use of the means of production. The latter, therefore, take on a social character before labour does.

The saving of constant capital obtained in this manner equally modifies 'the ratio of surplus-value to the total capital advanced, i.e. to the sum of the values of its constant and variable components'.¹ For the reasons examined in the previous chapter, Marx sets this point aside so as to return to it at a later stage. In relation to this, he writes that 'the particular course taken by our analysis forces

1. Marx 1976a, p. 442.

this tearing apart of the object under investigation; this corresponds also to the spirit of capitalist production'.²

Secondly, co-operation gives rise to a saving of labour time due to the spatial simultaneity of the productive tasks. The same number of workers during the same working time accomplish the same productive ends more quickly when they work one next to the other with a common aim, as opposed to when they work one after the other. For example, a working day consisting of 10 hours and 10 workers, that is to say, a working day of 100 hours, is more productive than 10 successive days of 10 hours by the same workers. The working time remains in both cases 100 hours, but its constitutive parts change because of the reduction of the unit value of the produced commodities and the reduction of the value of the labour-power resulting from this. The productivity of the combined labour-power is therefore greater than the addition of the separated productivities. The collective worker is bigger than the individual workers added up. This appears blatantly in certain industries where the available time for carrying out a given productive task is limited and where as a result the useful effect of labour is, more than elsewhere, dependent on the simultaneous employment of many workers. This is the case in the sectors that depend on weather conditions, for example.

The analysis of simple co-operation already shows the influence of the 'scale of production' factor on the constitutive parts of working time and constitutes an essential element for understanding the tendency of capital to grow ever more concentrated.

Obviously, the aim of capital is not to increase relative surplus-value but to increase profits, and this is not exactly the same thing. The reduction of the unit-value of commodities in a given industry only translates into a reduction of the value of labour-power to the extent that these commodities enter into the sphere of consumption of the productive class. The mechanism of relative surplus-value as such would only have, as a result, an extremely limited and negligible positive influence on the mass and the rate of surplus-value of this industry. In reality, the reduction of the unit-value of commodities allows the industry in question to sell at a price that is higher than their individual value, but lower than the social value of this type of commodities, thus realising what Marx calls an 'extra surplus-value'.³ The latter disappears as soon as the saving in capital becomes generalised.

2. Marx 1976a, p. 443.

3. Marx 1976a, p. 436.

9.2 The manufacture and the saving of time

The manufacture is the place where the fragmentation of the craft begins to develop. The saving of necessary labour time and the development of very specific skills are two sides of the same coin.

For the same productive operation the fragmented worker uses less time than the craftsman for whom this operation is just one among many others. The transition from one operation to another sometimes entails moving to another place and changing instruments. In both cases, it means an interruption to the labour process. The sentencing of the worker to the repetition of the same specific operation therefore eliminates the pores of the working day and increases the intensity of labour.

The fragmentary worker, who executes time and again the same simple productive act, develops to the point of perfection the specific skill required by this act in such a way as to obtain the intended effect by expending less labour-power.

The manufacturing period is characterised by a multiplication/specialisation of the labour tools adapted to those conditions newly created by the fragmentation of the craft.

This breaking down of the craft requires in turn an exact planning of the productive process in a way that ensures a balanced distribution of the various partial tasks aiming at the production of the same commodity. The production of a commodity requires fragmented operations of a diverse nature and in differing quantities, and diverse operations require execution times of a different length. Therefore, the necessary labour time for the production of each part of the commodity must be rigorously respected, for every delay has cumulative effects. The respect of certain authoritatively determined rhythms is now presented as a technical law of production. Needless to say, this immediate interdependence of the various tasks forces workers to increase their expenditure of labour-power during the same time, namely, to increase the intensity of labour.

The selection and the grouping together of workers according to the abilities prevalent in each one of them already begin in the manufacture. Workers are classified as skilled or unskilled according to the complexity of the productive operations for which they have been chosen. The breaking down of the craft enables the reduction of training costs – especially those associated with training time – and, as a result, leads to an additional reduction in the value of labour-power.

In the manufacture, one can already observe the radical divorce between economic progress and social progress, and when one examines the division of labour in the workshop, both economic and social progress are presented as being not merely separate, but rather opposed. Marx's merit in comparison to classical economics is to have made this divorce obvious for everyone to see. No

idea is more alien to Marx than that of a linear and gradual progress of humanity, of social progress stemming directly from economic progress. The increase in labour productivity, such as it appears in the capitalist workshop, has an extremely high social cost. Marx insists on this:

It [the manufacture] converts the worker into a crippled monstrosity by furthering his particular skill as in a forcing-house, through the suppression of a whole world of productive drives and inclinations, just as in the states of La Plata they butcher a whole beast for the sake of his hide or his tallow. Not only is the specialized work distributed among the different individuals, but the individual himself is divided up, and transformed into the automatic motor of a detail operation, thus realizing the absurd fate of Menenius Agrippa, which presents man as a mere fragment of his own body.⁴

Marx is a philosopher of the individual and 'free individuality'. The fragmented, humiliated, scorned and reduced individual is alienated and far from being 'at home'. This is the place from which the respect for the classical city-state Athens – lost paradise and promised land – stems. Marx's revolutionary project is nothing other than that of the reconciliation of the individual with himself, who by his own initiatives must search for his own fragments, recover the lost time and return 'home', purified from slavery thanks to a long journey through the maze of alienation. Certainly, the *polis* constitutes the ideal of the best representatives of German civilisation – Hegel, Lessing, Goethe, Schiller, Hölderlin, and many others – but it is in Marx where this ideal descends from the literary and philosophical sky in order to penetrate the factory and transform itself in this way from a critical weapon into armed critique. As a thinker of free individuality⁵ and freedom, Marx is not the architect of statist and authoritarian societies, such as opinion and ignorance might want him to be.

But no iron necessity or metaphysical force called 'progress' linearly lead to the kingdom of freedom. It would be a grave injustice to Marx to confuse his (sometimes excessive) optimism with a sort of poorly digested determinism:

'If' dreamed Aristotle, the greatest thinker of antiquity, 'if every tool, when summoned, or even by intelligent anticipation, could do the work that befits it, just as the creations of Daedalus moved of themselves, or the tripods of Hephaestus went of their own accord to their sacred work, if the weavers'

4. Marx 1976a, pp. 481–2.

5. In volume II of *Prinzip Hoffnung*, Ernst Bloch undertakes the study of social utopias. As usual, he starts with some citations. From Marx's immense work, he chooses these three lines from the *Communist Manifesto*, which we translate and highlight: 'The place of the old bourgeois society, with its classes and its class contradictions, will take an association where the free development of each individual [*eines jeden*] is the condition for the free development of everyone'; see Bloch 1959, p. 547.

shuttles were to weave of themselves, then there would be no need either of apprentices for the master craftsmen, or of slaves for the lords'. And Antipater, a Greek poet of the time of Cicero, hailed the water-wheel for grinding corn, that most basic form of all productive machinery, as the liberator of female slaves and the restorer of the golden age.⁶

But Aristotle and Antipater lived in social conditions governed by a social logic and rationality vastly different from that of modern political economy. This is where their ideas come from, and not from the rationality of the modern economy that did not yet exist. This is why Marx continues with the following ironic lines:

Oh those heathens! They understood nothing of political economy and Christianity, as the learned Bastiat discovered, and before him the still wiser MacCulloch. They did not, for example, comprehend that machinery is the surest means of lengthening the working day. They may perhaps have excused the slavery of one person as a means to the full human development of another. But they lacked the specifically Christian qualities which would have enabled them to preach the slavery of the masses in order that a few crude and half-educated parvenus might become 'eminent spinners', 'extensive sausage-makers' and 'influential shoe-black dealers'.⁷

In the meantime, 'Hephaestus's tripods' and 'Daedalus's masterpieces' are no longer mythological achievements, but technical ones. Their names are robotics, electronics; in short, the technologies with the suffix '-ics'. But, as Marx writes, there is nothing better than a machine for prolonging (intensively and extensively) the working day.

The manufacturing division of labour is planned in such a way that the various productive activities are in equilibrium. The amount of labour-time necessary for such and such activity is therefore determined before production begins. The word 'necessary' in the previous sentence does not contradict itself. The laws that govern the distribution of working time in the manufacture are therefore different from the laws that govern the social division of labour. Marx makes use of this observation to clarify an important aspect of the law of value. His clarification confirms our interpretation of the law: 'the law of the value of commodities ultimately determines how much of its disposable labour-time society can expend on each kind of commodity. But this constant tendency of the various spheres of production towards equilibrium comes into play only as a reaction against the constant upsetting of this equilibrium'.⁸

6. Marx 1976a, p. 532.

7. Marx 1976a, pp. 532–3.

8. Marx 1976a, p. 476.

Contrary to appearances and to every other tradition in economics, the law of value, in Marx, entails not economic equilibrium, but rather non-equilibrium. Value is not a positive notion; rather, it is a notion contradicting itself. It both determines and does not determine the available social time for the production of a particular type of commodity. Value determines it as a 'necessity imposed by nature, controlling the unregulated caprice of the producers, and perceptible in the fluctuations of the barometer of market prices'.⁹ Value does not determine it for, precisely, the continuous destruction of the equilibrium – 'the unregulated caprice of the producers' – is its fundamental presupposition and *raison d'être*. If one takes a closer look, the complete realisation of value taken as a simple quantity of abstract labour, and its elimination as a logic and social relation, are synonymous. This observation excludes any positive definition of value.

What is at stake in the manufacture has to do with the saving and the control of time. From the fragmentation of labour, there arises a greater organisation and efficiency of labour. The intellectual impoverishment of the worker appears as an intellectual property of capitalist production. In this way, 'his own individual labour power withholds its services unless it has been sold to capital'.¹⁰ The control of knowledge and the control of time are the same thing. The worker's time no longer belongs to him. This is not, as in the beginning, because he lacks the material means of production, but rather because his labour-power becomes a cog in the clock-making system of the capitalist workshop. However, this clock-making system is far from being perfect. The craft, although fragmented, remains the basis of the manufacture: 'Since the handicraft skill is the foundation of manufacture, and since the mechanism of manufacture as a whole possesses no objective framework which would be independent of the workers themselves, capital is constantly compelled to wrestle with the insubordination of the workers'.¹¹

Thus, 'during the period between the sixteenth century and the epoch of large-scale industry capital failed in its attempt to seize control of the whole disposable labour-time of the manufacturing workers',¹² and the manufacturers are forced to follow the migratory movements of workers.

9.3 Large-scale industry as a clock-making system

If the mere quantity of labour functions as a measure of value regardless of quality, it presupposes that simple labour has become the pivot of industry. It presupposes that labour has been equalized by the subordination of man

9. Ibid.

10. Marx 1976a, p. 482.

11. Marx 1976a, pp. 489–90.

12. Marx 1976a, p. 490.

to the machine or by the extreme division of labour; that men are effaced by their labour; that the pendulum of the clock has become as accurate a measure of the relative activity of two workers as it is of the speed of two locomotives. Therefore, we should not say that one man's hour is worth another man's hour, but rather that one man during an hour is worth just as much as another man during an hour. Time is everything, man is nothing; he is at the most, time's carcase. Quality no longer matters. Quantity alone decides everything; hour for hour, day for day; but this equalizing of labour is not by any means the work of M. Proudhon's eternal justice; it is purely and simply a fact of modern industry.¹³

Since, among other things, Marx speaks in the above passage of the 'pendulum of the clock', let us note (for the amateurs of the history of technology) that the steam-engine, the symbol of large-scale industry, is the direct result of progress in clock-making. It is by working on the clock that Christian Huygens conceives, at the end of the seventeenth century, the steam-operated piston that will be fully developed by his student Denis Papin at the beginning of the eighteenth century. From the steam-piston to the steam-engine, there are some intermediary stages lasting for a period of three-quarters of a century. Only at the end of eighteenth-century will James Watt, in collaboration with the clockmaker John Wilkinson, actually produce the steam engine.¹⁴

The division and subdivision of labour in the manufacture, the reduction of the traditional craft down to simple and repetitive gestures, and the specialisation of the labour tools, will encourage the development of machine-tools reproducing the initially manual productive 'gestures'. It was first necessary to mechanise labour, namely, to homogenise and regularise the individual working time and transform it into a more or less measurable and abstract time, qualitatively identical, in order to subject the rhythm of labour to the rhythm of the machine at a later stage.

The lost intellectual powers of the producers appear, already in the manufacture, as the exclusive property of capital, as something alien and hostile to the worker. But it is in the modern factory that this alienation is completed. The machine seems to know what it is doing, while man is reduced to the slavery of a specific operation dictated by the specialised machine he serves: 'In handicrafts and manufacture, the worker makes use of a tool; in the factory, the machine makes use of him. There the movements of the instrument of labour proceed from him, here it is the movements of the machine that he must follow'.¹⁵

13. Marx 1956, pp. 58–9.

14. See Attali 1982, pp. 173–4.

15. Marx 1976a, p. 548.

In every production of value and surplus-value, it is 'not the worker who employs the conditions of his work, but rather the reverse, the conditions of work employ the worker. However, it is only with the coming of machinery that this inversion first acquires a technical and palpable reality'.¹⁶

In other words, it is in the factory where capital as a subject becomes a completed reality. It is in this very place that the 'one-hour worker' appears, an ordinary thing whose value is measured in terms of the time during which it functions. Capital is part of this picture as the intellectual force of production, as a science integrated in the automaton, as a regulatory clock of industrial life imposing on it the discipline of the barracks.

By rendering muscular power superfluous and requiring suppleness, mechanisation opened the factory-gates to women and children. The value of labour-power is, by the same token, depreciated since the wage of the male worker is no longer sufficient for the maintenance of his family. This sad story of the super-exploitation of women and children in the countries of the first wave of industrialisation is repeated today in the 'newly industrialising' countries. The industrial 'miracles' of some countries, and not only South-East Asian ones, are based on a boundless and limitless exploitation of the labour-power of women and children, on a sort of modern slavery.

Marx sees in the machine a formidable instrument for prolonging the working day:

If machinery is the most powerful means of raising the productivity of labour, i.e. of shortening the working time needed to produce a commodity, it is also, as a repository of capital, the most powerful means of lengthening the working day beyond all natural limits in those industries first directly seized on by it.¹⁷

The machine loses its value not only when it functions productively but also during the breaks in the productive process. The longer the machine actively functions, the more profitable it is. Moreover, the longer the machine is present in the productive sphere, the more its value risks decreasing faster than the pace at which its use value is worn out: the value of a machine is not determined by the time that was necessary for its production, but instead by the time that is necessary for its production. Technical progress depreciates the value of capital, and this is the point from which the need for capital to be productively consumed as quickly as possible arises.

The extension of the working day enables an increase in the mass of surplus-value or in the mass of profits without proportionately increasing the value productively invested in constant capital (fixed capital can remain unchanged).

16. Ibid.

17. Marx 1976a, p. 526.

In short:

[The] capitalist application of machinery on the one hand supplies new and powerful incentives for an unbounded prolongation of the working day, and produces such a revolution in the mode of labour as well as the character of the social working organism that it is able to break all resistance to this tendency. But on the other hand, partly by placing at the capitalists' disposal new strata of the working class previously inaccessible to him, partly by setting free the workers it supplants, machinery produces a surplus working population, which is compelled to submit to the dictates of capital. Hence that remarkable phenomenon in the history of modern industry, that machinery sweeps away every moral and natural restriction on the length of the working day. Hence too the economic paradox that the most powerful instrument for reducing labour-time suffers a dialectical inversion and becomes the most unfailing means for turning the whole lifetime of the worker and his family into labour-time at capital's disposal for its own valorization.¹⁸

The regulated working day, or the legislation concerning the length of working time, stems directly from the social reaction against economic progress. Once the working day is limited within its legal bounds, it encourages the tendency towards the intensification of labour.

Marx distinguishes between the notions of 'productivity' (in the strict sense of the term) and 'intensity' of labour. Concrete and particular labour can be more or less productive. Abstract and general labour is indifferent with regard to its productivity. It can only be more or less extensive and intensive. These determinations belong to the category of the quantity. The 'quality' of abstract labour is precisely that it has no 'quality'.

It is obvious that 'extension' and 'intensity' form an inseparable couple, for every intensive magnitude presupposes a certain extension, while every extensive magnitude presupposes a certain intensity. Nevertheless, the longer the working time, the less it can be intensive, and the more working time is intensive, the shorter it is. This is a natural law.

It is, therefore, not at all surprising that the reduction of working time immediately leads to the tendency towards its intensification. What is lost in absolute time, in clock time, must be won back through the intensification of the legal working day.

In general, relative surplus-value is produced by raising the productivity of the worker, and thereby enabling him to produce more in a given time with the same expenditure of labour. The same amount of labour-time adds

18. Marx 1976a, pp. 531–2.

the same value as before to the total product, but this unchanged amount of exchange-value is spread over more use-values. Hence the value of each single commodity falls. But the situation changes with the compulsory shortening of the hours of labour. This gives an immense impetus to the development of productivity and the more economical use of the conditions of production. It imposes on the worker an increased expenditure of labour within a time which remains constant, a heightened tension of labour-power, and a closer filling-up of the pores of the working day, i.e. a condensation of labour, to a degree which can only be attained within the limits of the shortened working day. . . . The denser hour of the 10-hour working day contains more labour, i.e. expended labour-power, than the more porous hour of the 12-hour working day.¹⁹

Clearly, under *ceteris paribus* conditions, the man of one dense hour is worth more than the man of a more porous hour. The degree of intensity of labour can only be specified by reference to a supposedly fixed point: the average intensity of labour. This average point is obviously higher or lower according to the evolution of the particular intensities, so that, for example, a labour of an average intensity of ten hours (clock hours) subsequently counts for nine hours of average intensity of labour. The 'translation' of the working hours of particular intensities into hours of average intensity takes place on the market: the higher intensity of a certain labour must be recognised as such by the purchase of the commodity produced by this labour.

Since working time and its control are the main issue in the factory, the discipline of the barracks is imposed and a system of officers and non-commissioned officers becomes the vital cog of this clock-making system.

The saving of working time, its extension and its intensification are presented in the factory as a technical necessity before being presented as an external coercive law. The homogenous and abstract time of the clock imposes its law long before Taylor's stopwatch. In the factory, 'the automaton itself is the subject, and the workers are merely conscious organs, co-ordinated with the unconscious organs of the automaton, and together with the latter subordinated to the central moving force'.²⁰ Long before Henry Ford, electricity and the mechanical assembly-line, the pendulum of the clock and the clock-making of the steam engine announce the modern period. The principles are there. The rest is simply technical progress.

19. Marx 1976a, p. 534.

20. Marx 1976a, pp. 544–5.

Georg Lukács sums up the essential part of the story:

Thus time sheds its qualitative, variable, flowing nature; it freezes into an exactly delimited, quantifiable continuum filled with quantifiable 'things'...: in short, it becomes space. In this environment where time is transformed into abstract, exactly measurable, physical space, an environment at once the cause and effect of the scientifically and mechanically fragmented and specialised production of the object of labour, the subjects of labour must likewise be rationally fragmented. On the one hand, the objectification of their labour-power into something opposed to their total personality (a process already accomplished with the sale of that labour-power as a commodity) is now made into the permanent ineluctable reality of their daily life. Here, too, the personality can do no more than look on helplessly while its own existence is reduced to an isolated particle and fed into an alien system'.²¹

But this particular time is just one of the aspects of the capitalist organisation of time. More specifically, it is one of the aspects of the time of production, its mechanical aspect. The capitalist organisation of labour is a moment of the social relation that when examined separately, as a fragment, appears as a mechanical system.²²

Capital as an organisation of time is not limited to the time of production.²³ The contradictory unity of the time of production and the time of circulation is capital itself as a specific organisation of time. Marx examines and develops the various aspects of this contradiction as early as the *Grundrisse*:

Capital itself is the moving contradiction, (in) that it presses to reduce labour time to a minimum, while it posits labour time, on the other side, as sole measure and source of wealth. Hence it diminishes labour time in the necessary form so as to increase it in the superfluous form; hence posits the superfluous in growing measure as a condition – question of life and death – for the necessary. On the one side, then, it calls to life all the powers of science and

21. Lukács 1971, p. 90. The nautical stopwatch – a vital instrument of the boom in international trade and the industrial revolution, hundreds of which were fabricated in 1790 in England – is a symbolic instrument of this mathematical time. Attali writes that the nautical stopwatch 'gives a new meaning to the measure of time and enables the development of a rational, and detached from the empirical experience of the world, approach to seafaring: with the calculation of the waypoint, time and space become a mathematical language. This space that is divided into squares unmasks the world, reveals it and demystifies it. Calculation and no longer power: the measure of time opens the way for its valorisation'; Attali 1982.

22. Hegel speaks of mechanical functions situated inside an organism, such as, for example, the mechanism of memory.

23. By the way, this is why, whatever the importance of production, we prefer to substitute Attali's 'time of the machines' with 'time of capital'; see Attali 1982.

of nature, as of social combination and of social intercourse, in order to make the creation of wealth independent (relatively) of the labour time employed on it. On the other side, it wants to use labour time as the measuring rod for the giant social forces thereby created, and to confine them within the limits required to maintain the already created value as value'.²⁴

In this passage, there is, in embryonic form, a theory of unemployment and crisis; a theory of the inner logic and the contradictions driving forward capitalist development that has lost nothing of its relevance.²⁵

This analysis leads directly to the conclusion that capital, far from being a social relation of human freedom, is a free and autonomous social relation, based on the essential non-freedom of the individual, on its subjugation to its own social relations: 'It is not individuals who are set free by free competition; it is, rather, capital which is set free. . . . The reciprocal compulsion which the capitals within it practise upon one another, on labour etc. (the competition among workers is only another form of the competition among capitals), is the *free*, at the same time the *real* development of wealth as capital'.²⁶

The very idea of freedom becomes confused, in our societies, with the freedom of choice, with 'free will', an idea that philosophy has already criticised long ago. Marx, in accordance with the Hegelian tradition (and contrary to Fichte and Kant), considers that true or universal freedom is incompatible with a system of external constraints, for the constraint is a 'limit' whereas true freedom is unlimited. This contradiction is unbearable for the mind, and this is where the idea of a boundless man arises, a tendentially generic or universal man within the framework of a free society, called 'kingdom of freedom' as opposed to that of 'necessity'.

24. Marx 1973, p. 706.

25. See, in particular, Gorz 1988.

26. Marx 1973, pp. 650–1.

Part Two

The Time of Circulation

Introduction

Circulation, because a totality of the social process, is also the first form in which the social relation appears as something independent of the individuals, but not only as, say, in a coin or in exchange value, but extending to the whole of the social movement itself. The social relation of individuals to one another as a power over the individuals which has become autonomous, whether conceived as a natural force, as chance or in whatever other form, is a necessary result of the fact that the point of departure is not the free social individual. Circulation as the first totality among the economic categories is well suited to bring this to light.¹

As Lipietz rightly points out, 'it is astonishing that the concept of value in process . . . has progressively disappeared from the post-Marxian debate on value'.² The reader of the second volume of *Capital*, especially of its initial chapters, faces a paradox. There is nothing more interesting in Marx's work than the analysis of capital itself, an analysis that takes place, in a developed and concentrated form, in the initial chapters of this book. However, nothing has given rise to so few discussions and such minimal debate as this analysis. As Rubel notes in his introduction, the second volume of *Capital* has been almost completely forgotten.

1. Marx 1973, p. 197.

2. Lipietz 1985, p. 105.

How can this paradox be explained? According to a widespread myth, persistent but without any content, Marx progressively distanced himself from Hegel and his method. In *Capital*, especially at the beginning, one can, allegedly, find the last traces of Hegelian influence. Here is a platitude (in France) that almost everyone accepts, as if it were obvious. It is therefore probable that the second volume and especially its initial chapters (the others are merely the development of what remains implicit in these initial chapters) do not fit in with the theoretical schema of a number of wrong assumptions. The difficulty of the text constitutes another explanation, for, having remained at the stage of the manuscript, the text often requires interpretation.

In the first section, we will examine the cyclical and organic movement of capital, and will show the sense in which it is a remarkable application of the Hegelian method, an application that is far more developed and rigorous than in the *Grundrisse*. What, in this last work, Marx called 'the dialectic of capital' appears again in the first four chapters of the second volume of *Capital*: a conceptual dialectic whose understanding constitutes the 'key' for understanding *Capital* as a whole.

The second section, which is situated at a lower level of abstraction, the time of circulation in the strict sense of the term, is devoted to the analysis and the articulation of the notions belonging to this temporality.

Section One

The Organic Movement of Capital

Chapter Ten

The Three Cycles/Circuits of Capital

Further, the living Substance is being which is in truth *Subject*, or, what is the same, is in truth actual only in so far as it is the movement of positing itself, or is the mediation of its self-othering with itself. This Substance is, as Subject, pure, *simple negativity*, and is for this very reason the bifurcation of the simple; it is the doubling which sets up opposition, and then again the negation of this indifferent diversity and of its antithesis [the immediate simplicity]. Only this self-*restoring* sameness, or its reflection in otherness within itself – not an *original* or *immediate* unity as such – is the True. It is the process of its own becoming, the circle that presupposes its end as its goal, having its end also as its beginning; and only by being worked out to its end, is it actual.¹

In the first part of this study (in Chapter Seven), we introduced the cycle of capital as a cycle of the M-C-M' type. To the extent that it designated a movement within the sphere of circulation, this cycle represented the three moments of a purely commercial capital, that is, a form of capital derived from its fundamental form, a reality that is incomplete and incomprehensible in itself. Through these contradictions, circulation referred us back to industrial capital. We then examined the production process of industrial capital such as it appears in the temporality of production.

1. Hegel 1977, p. 10; Hegel 1986, p. 23.

We now need to examine circulation in the broad sense of the term, the *Kreislauf* of capital, its cycle or circuit, namely, the circulation of capital as a phenomenon that includes the moment of production.

For the first time in *Capital*, Marx presents in the first four chapters of the second volume the notion of capital in a concentrated and complete way.

The fact that this notion is analysed for the first time in the second volume of a work whose title is *Capital* can seem paradoxical. However, we will see in detail that the notion examined here unites the sphere of production and that of circulation, which are merely its moments. Thus, it presupposes the analysis of circulation (in the strict sense of the term), as well as that of production. More specifically, capital can only really be understood as the cycle [*Gesamtkreislauf*] that brings together all three circuits. The first of these three circuits is that of money capital.

10.1 The circuit of money capital

This circuit can be represented in the following way: $M-C \dots P \dots C'-M'$. The first stage of the process ($M-C$) designates the first stage of circulation, namely, the act of buying means of production (Mp) and labour-power (Lp). This results in the following formula: $M = C = Mp + Lp$. P symbolises the act of production, which is the second stage in the cycle. $C'-M'$ designates the second act of circulation, namely, the sale of commodities, which is the third and last stage in the circuit. The apostrophe accompanying the second C and M , designating the produced commodity and the money that it returns, reminds us that one must add a surplus-value to the initial value of capital. The dots before and after P designate the fact that simple circulation is conceptually interrupted by the production process, and not that production lasts for a given amount of time. We admit, for the time being, that the cycle of money capital appears as a time sequence; that is to say, the entire money capital suddenly transforms itself into productive capital, and the latter transforms into commodity capital before it can finally return to its initial form enriched with a surplus-value.

This assumption facilitates the presentation. Let us note, however, that at the level of abstraction at which we are situated, there is nothing more negligible than time. The conceptual movement we are following is situated above temporal and spatial determinations.

Therefore, we can see that, in its circuit, capital appears in three forms. The commodity capital form (as well as the money capital form) seems to appear twice. When we take a closer look at things, we see, however, that Mp and Lp function like commodities in the hands of their sellers, but do not do so in the cycle of capital in which they enter as productive capital. The latter appears in

the cycle of money capital as the middle-term between the universal commodity or money and the particular commodity that is produced. Only this particular commodity functions as commodity capital in the cycle.

The initial transformation of money into factors of production, which is the act of purchasing for our capitalist, is, for the person who possesses Mp and Lp, the act of selling his commodity. Consequently, this transformation presupposes the existence of a dual market. On the one hand, there needs to be a market for means of production, the objective factors of production; that is, there needs to be a more or less developed market-oriented production. On the other, there needs to be a labour market; in other words, labour-power must exist as an alienable object, as a commodity.

The act M-Lp, which is the act Lp-M for the worker, presupposes the class relation; it does not create it. It presupposes the existence of a class separated from its means of production. The historical circumstances of this separation do not interest us here. By insisting on this point,² Marx explicitly introduces us to a logical universe that stands on its own: the relations of exploitation and those of exchange exist as historically completed products and one need not wonder why this is so.

The value of capital in the form of money can only fulfil the functions of money. In the act M-Lp, or the act M-Mp, money capital can only function as the general means of purchase or payment. It is not because it purchases labour-power that money capital is capital, a relation of exploitation and exchange, but rather that by doing so money transforms itself into productive capital, and then abandons this form to become commodity capital before finally returning to its initial form enriched with a surplus-value. In the act M-Lp, taken on its own, the purpose of the process is not visible. Capital can be understood through its end-purpose, and because of this it appears as an organic process and not as a process that is 'composed' of various different acts.

The stage M-C, despite constituting a particular stage in the life of capital, belongs to the general circulation of commodities. Thus, it falls under the category of those determinations preceding the simple circulation of commodities and is subject to its laws. The actors involved in the exchange confront each other in this sphere as buyer and seller who exchange commodities of equal value.

The carrying out of the act M-C is the metamorphosis of money capital into productive capital. In productive capital one can find the personal as well as the objective factors of production. In the process of production, capital consumes its internal organs in order to transform them into a product of a higher value than its initial one. However, the capitalist process of production taken on its

2. Marx 1978, p. 115.

own, independently of the other stages in the cycle, cannot be distinguished at all from any other process of production. A series of utility objects serving as means of production are transformed in this process, through the act of labour, into a series of objects of a different utility. This is the basis of all material production.

The process of production appears, in the circuit of money capital, as a means, a necessity that is subject to the cyclical process of valorisation of value.

The surplus-value produced, and which is to be found in C' , appears for what it is, namely, the product of capital. Capital is an organism that possesses, like any other organism, the capacity to reproduce itself. Marx makes this point in so many words and without the ironic tone of certain similar passages in the first volume of *Capital* that can lead to wrong interpretations:

In the course of its functioning, productive capital consumes its own components, to convert them into a mass of products of a higher value. Since labour-power operates only as an organ of capital, the excess value with which surplus labour endows the product, over and above that of its constituent elements, is also the fruit of capital.³

Finally, some remarks are necessary with regard to the third stage of the process, which is that of the metamorphosis of the produced commodity into money.

C' and M' can be written as $C + c$ and $M + m$, with C and M symbolising the initial value of capital, and c and m symbolising surplus-value, according to the form that capital momentarily assumes. Thus, the total cycle can be written in a more explicit way:

$$M-C \dots P \dots (C + c) - (M + m)$$

If we set aside the process of production, as well as that of surplus-value, we return to the two acts of circulation: $M-C$ and $C-M$, purchasing and selling. The initial value of capital appears again at the end of the cycle in the same form as in the beginning. Surplus-value, on the other hand, only appears in the second half of capitalist circulation, or in the first half of a simple circulation, the act $c-m$.

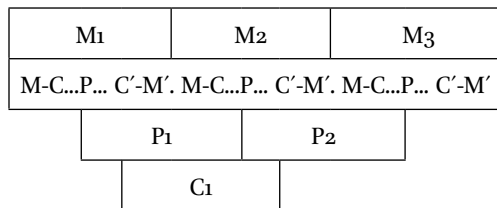
Like commodity capital, money capital appears twice in the cycle, but it functions as such only once, namely, when it plays an active role, which is when it initiates the whole process. Money functions as capital when it is invested with the aim of being accumulated, and this role is embodied by M , not M' . A big part of M' can, of course, be invested again with the same aim and, in this way, fulfil the function of money capital. In this case, however, it is no longer the last term of a completed cycle, but the first term of a new one. Moreover, M' cannot entirely function as money capital in the new cycle, for a part of it will be

3. Marx 1978, p. 121.

spent as simple money, in the form of income, for the individual consumption of the capitalist. M' is capital as the realisation and completion of a possibility already present in the beginning. It is capital when we read the circuit from back to front, that is, through its relation with the first and the second stage of the process, in relation therefore to a 'past'. In the same way that, during the stage $M-C$, capital functions as money capital, during the stage $C'-M'$ capital functions as commodity capital. This does not seem to have attracted the attention of the various commentators despite Marx being very explicit about it: 'It is not the active function of money capital to present itself as M' '; its own representation as M' is rather a function of C' '.⁴ 'The transformation back into the money form is a function of the commodity capital C' ... not of money capital'.⁵

We can, therefore, see that the circuit $M-C \dots P \dots C'-M'$ possesses five terms, but that it describes three functions of capital to which correspond three forms of capital: the monetary, the productive, and the commercial form. We emphasise this point because it is necessary and essential for understanding the 'syllogistic' structure of capital, such as Marx describes it in 1878. We will return to this in due course.

The circuit of money capital brings to the surface, in a clearer way than the circuit of productive capital, one of the three fundamental capacities of capital, namely, its capacity to reproduce itself. Here, we use the term 'reproduction' in its usual meaning, that is, we emphasise the property of capital to be valorised and to grow in the same way that a living organism reproduces itself as genus and not its capacity to maintain itself, which is equally characteristic of any such organism. If one assumes the repetition of the cycle of money capital – a circuit characterised by the fact that money capital constitutes its start- and its end-point – one can see that productive and commercial capital form their own cycle:



The first cycle of productive capital (P_1) is completed before the second cycle of money capital (M_2), whereas the first cycle of commodity capital is completed before the second cycle of productive capital (P_2). When the *Kreislauf* of capital in one of its forms is completed, the other two forms are still going through their

4. Marx 1978, p. 129.

5. Marx 1978, p. 130.

respective cycles. The ambiguity of the first M' ,⁶ which is capital as the realised possibility of the previous stages of M_1 , disappears, for it continues to function as money capital in C_1 , which, as we will see, also describes the circulation of the total value of capital. The difficulties of each cycle are overcome by the intervention of the others.

In the first cycle of monetary capital (M_1), in the act $M-C$, the capitalist character of production, as we have seen, was assumed, whereas now the first stage of M_2 appears as the result of the process of production. P is no longer presupposed by $M-C$. It posits $M-C$ as the necessary condition of its own reproduction.

10.2 The circuit of productive capital

$P \dots C'-M'-C \dots P$ represents the cycle of productive capital. Circulation now appears as the middle term mediating the production process of capital. This process constitutes the start- and end-point of the cycle. The process of circulation, and not that of production, serves as a means in a process whose aim is the reproduction of productive capital.

Moreover, circulation in this cycle begins with the sale of commodities. During the sale of commodities, capital functions as commodity capital and is then fulfilled with the purchase of means of production, during which capital functions as monetary capital. Here circulation is $C-M-C$, whereas in the preceding cycle it was $M-C-M$.

The circuit $P \dots \text{etc.} \dots P$ shows the capacity of capital to reproduce itself as an organism, and to maintain and conserve itself. Contrary to the cycle of monetary capital, 'reproduction' here means the capacity of an organism to conserve itself rather than that of 'giving birth to', for the second P of the cycle is not necessarily greater than the first. The production of surplus-value does not necessarily entail accumulation, for it can be completely consumed in the form of income. This is the reason why the 'circuit of productive capital has the general formula: $P \dots C'-M'-C \dots P'$,⁷ and not $P \dots \text{etc.} \dots P'$.

As in cycle I (money capital), in cycle II (productive capital), we have five terms but only three functions. To start with, capital functions productively. It then fulfils its commercial function in order to be transformed into monetary capital. Finally, it functions as money capital by buying the means of production. The second C of cycle II and the first C of cycle I both function as commodities

6. M' is ambiguous because M' is money-capital that, contrary to M , does not function as such. It is and is not money-capital. This contradiction is neither insoluble nor objective. It forces the whole process to move forward, and this 'forward' is nothing other than the cycle of productive and commercial capital.

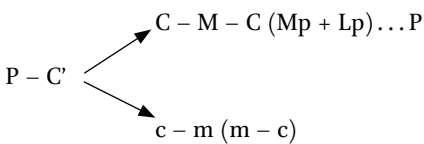
7. Marx 1978, p. 144.

in the hands of their sellers, and are destined to function as productive capital in both cycles. However, the second P of cycle II, despite being in the form of productive capital, does not function as such because this function formally belongs to the subsequent cycle II.

The second P of cycle II, contrary to the second M of cycle I, is not at all ambiguous. It must be productively consumed in the same way that other commodities are consumed as use-values (once they are bought). In other words, productive capital can only function as capital, whereas monetary capital (M') can stop being capital and fulfil the function of simple money by being spent unproductively, by being hoarded, and so on. Therefore, we see that the cycle P...etc....P expresses through its form the necessity for capital to maintain itself through a permanent reconstitution of its internal organs. The 'capacity' is permanent, but the 'production' or the 'constitution' of the internal organs of capital is periodical, repetitive and cyclical, something that explicitly appears in the circuit of productive capital:

In the form M – etc. – M', capital finds itself at the end in the same form as in the beginning, and this allows it to repeat and perpetuate the same circuit. But the necessity of repetition is not expressly present in the form itself, as is now the case with the form P – etc. – P'.⁸

The cycle of productive capital, in the framework of simple reproduction, describes the transformation of surplus-value from its commercial to its monetary form (c-m). Here surplus-value carries out, as in the cycle of money capital, the first act of simple circulation. Contrary to the latter, surplus-value in the cycle of productive capital appears neither in its second C nor in its last term:



We see in this schema that a part of M' (the part m representing surplus-value) will be spent as income. This places it outside the cycle of the value of capital, and in the general circulation of commodities. This is why we have placed the act m-c between brackets.

In the framework of the expanded reproduction of capital, the value of c and m is not supposed to represent the totality of surplus-value, but only that part of it that is destined to the individual consumption of the capitalist. The remaining part is supposed to be productively invested so that the value of the second P should be P', that is to say, greater than that of the first P. Thus, the difference in value between

8. Marx 1968, p. 528.

the last and the first term (P' and P) is not equal to the surplus-value, as was the case in cycle I ($M'-M$ = surplus-value). We see, therefore, by following the traces of surplus-value, that, like simple reproduction ($P \dots \text{etc.} \dots P$), expanded reproduction ($P \dots \text{etc.} \dots P'$) does not express the fact that capital produces surplus-value, but rather the fact that it reproduces, maintains and conserves itself.

10.3 The circuit of commodity capital

$C'-M'-C \dots P \dots C'$ represents the cycle of commodity capital. As in cycles I and II, in cycle III (the cycle of commodity capital), capital successively fulfils three functions. First, it functions as commercial capital, then as monetary capital, and finally as productive capital. C (the third term of the cycle) functions as commodity capital in the cycle of another capital, whereas the second C' is capital in a commercial form that has not yet started to function as commodity capital.

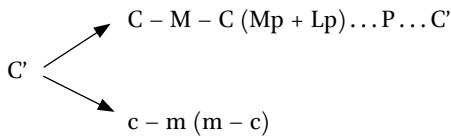
In cycle I, circulation was interrupted by the process of production of capital. Its first stage preceded this process, and its second stage followed it. In cycle II, circulation followed the productive function of capital, thus constituting the middle term that productive capital must go through in order to reappear in its productive form. In cycle III, the circulation of capital precedes the process of production.

C' (the first term in the cycle of commercial capital) is the same C' of cycles I and II. Thus, the first term of cycle III, contrary to those of cycles I and II, combines in it the initial value of capital and surplus-value. This is the reason why it takes an apostrophe.

The cycle $C' \dots \text{etc.} \dots C'$ expresses the dependence of capital on sales markets, towards the creation of which it contributes. The cycle begins with the act of selling $C'-M'$. The smooth completion of this act appears, therefore, from the very outset, as the necessary condition for the normal functioning of capital. Although the individual consumption of social classes and the productive consumption of other firms do not formally appear in any of the cycles of a particular capital, they constitute a necessary and essential factor for the life of capital. If the soul of C' emigrates to M' , this is because its body leaves the sphere of circulation to settle in that of consumption. If the act $C'-M'$, the first and essential condition of the cycle, does not describe consumption, it obviously entails it. This is the reason why $C'-M'$ means that 'the consumption of the entire commodity product is presupposed as the condition for the normal course of the circuit of capital itself'.⁹

9. Marx 1978, p. 173.

The following schema can help us follow in detail the circulation of surplus-value:



Surplus-value c is transformed into money at the same time as C is transformed into M . It therefore carries out its first act of circulation as capital. Its second act of circulation falls outside the cycle of capital. This is why it appears between brackets in the schema. In the framework of simple reproduction, the value that the businessman spends as income, or – what amounts to the same thing – the value that he takes out of the market as individual consumer, is smaller than the surplus-value to be found in C' . His individual consumption is reduced so that his productive consumption can increase.

If we pursue the logical consequences of this circuit, we will end up with the schemas of expanded reproduction that Marx introduces in the last chapter of the second volume of *Capital*.

Circuit I is the circuit of the mercantile system. The classical economists use circuit II to analyse the movement of industrial capital. Circuit III is at the basis of Quesnay's economic table. Marx is the first to have conceived of the life of capital as the unity of these three circuits, offering us, in this way, a central and operational concept enabling us to understand the reality of his times and ours. Marx did not add up the three circuits, for their unity, as we will see, cannot be understood as an addition.

Chapter Eleven

Capital as Syllogism

The objective sense of the figures of the syllogism is generally that everything rational shows itself to be a threefold syllogism.¹

The first three chapters of the second volume can be considered as preparatory for the fourth, entitled 'The three figures of the circuit'. The latter chapter presents some difficulties and problems that it is necessary to eliminate in order to understand the syllogistic structure of capital.

Taking Tc to stand for the total circulation process, we can depict the three figures as follows:

(I) $M-C \dots P \dots C'-M'$

(II) $P \dots Tc \dots P$

(III) $Tc \dots P(C')$.²

The total process presents itself as the unity of the process of production and the process of circulation; the production process is the mediator of the circulation process, and vice versa.³

This last observation of Marx's is correct, but if one takes a closer look at the problem, one will note that this observation only results from the three proposed forms of the circuit in a problematic way. If one examines each circuit in relation to the two others, one will observe certain asymmetries: in circuit I, production mediates the two stages of circulation, whereas in

1. Hegel 1991b, p. 263; Hegel 1970e, p. 339.

2. Marx 1978, p. 180.

3. Ibid.

circuit II it is circulation as a whole that mediates the process of production. This process appears twice. In circuit III, no mediation seems to take place.

These asymmetries would be insignificant if Marx wanted us to understand that capital is simply the unity of the two processes or the two spheres. However, he goes further than that. He wants to indicate to the reader that each function of capital, which constitutes a moment in an organic totality, is necessarily a starting-point, transitional point and end-point in the process: 'If we take all three forms together, then all the premises of the process appear as its result, as premises produced by the process itself. Each moment appears as a point of departure, of transit, and of return'.⁴

If the term 'moment' in the cited passage designates the process of production and the entire process of circulation, one observes that, in Marx's cycles, total (simple) circulation does not appear as a point of return. If the term 'moment' designates the two stages of circulation taken separately, and the process of production, then it is the stage M-C that does not appear anywhere as a point of return. Finally, the third and last possibility is as follows: if the same term simply designates the form of capital (including the non-functional forms), one no longer knows which is the transitional point in any of the three cycles, for in each one there would be two such points: P and C' in circuit I, C' and M in circuit II, and M and P in circuit III. In the last instance, in what way could production be considered the mediator of circulation?

The entire problem can be traced back to the fact that the first two circuits are presented as the series of their terms, whereas circuit III is presented more like the series of the forms/functions [*Funktionsformen*] that capital adopts and abandons in its movement: Marx puts the second C of the circuit in brackets because it does not function as such in the circuit that he is examining.⁵

In any case, the figures presented in that chapter are wrong. One can introduce the circuits of capital in two ways: (1) as a sequence of five terms, as Marx does in the first three chapters; and (2) as a sequence of forms/functions of capital.

We believe that the emphasis must now be on the forms/functions of capital, for on the basis of the latter we will avoid repetition and be able to present Marx's new (additional) developments in a coherent way.

4. Marx 1978, p. 180.

5. It is useful to note that the beginning of the fourth chapter, on which we have just commented, is found in manuscript V as a footnote. It is, therefore, quite probable that the author of *Capital* intended to develop it further.

The three circuits of capital can be written in the following two ways:

<i>'Formal' circuits</i>	<i>'Functional' circuits</i>
I) M-C...P...C'-M' or	M...P...C'
II) P...C'-M'-C...P or	P...C'-M
III) C'-M'-C...P...C' or	C'-M...P

The passage from a 'formal' circuit to a 'functional' circuit is very simple. We just need to eliminate the terms that appear twice. This elimination is 'legitimate', logical and complies with the spirit of Marx's work. We proceed in the following way:

M-C...P...C'-M'. The first C is eliminated since it only functions as a commodity in the circuit of another capital, or – as is necessarily the case for labour-power – it is merely a simple commodity in the hands of its seller. M' is eliminated since it has no active role in our circuit (a part of this quantity of money will play an active role in the following circuit of money capital). We therefore obtain the circuit M...P...C'. By following the same principle we obtain the other 'functional' circuits. The apostrophes designating surplus-value follow the rules of its circulation, which we outlined in the previous chapter. We assume that we are dealing here with a case of simple reproduction in order to avoid a useless multiplication of apostrophes.

Circuit I shows that the process of production mediates the function of money capital (the act of purchasing or the first stage of circulation – second stage of a simple circulation) and the commercial function of capital (the second stage of circulation).

In circuit II, commodity capital (the act of selling or the first stage of circulation) is the middle-term mediating the productive function of capital and the monetary function (the act of purchasing or the second stage of circulation).

In circuit III, money capital (the act of purchasing or the second stage of circulation) mediates productive capital and capital in its commercial form/function (the act of purchasing).

In circuit I, the valorisation of value appears as the decisive aim and the result of the movement. In circuit II, the expanded value appears as the means through which capital can reconstitute its internal organs. In circuit III, the realisation of the expanded value constitutes the starting-point of the movement, thus exposing capital's permanent need to internalise the solvent social needs (themselves in movement), which seem to constitute, as it were, its 'external environment'.

In cycle I, production interrupts circulation and shows that the latter includes two distinct yet complementary stages. In circuit II, circulation follows production, contrary to what appears in the same circuit as it is presented by Marx. Its second P does not have an inscription on its forehead saying that it is capital in

a productive form but that it does not yet function as such. In circuit III, circulation precedes production, something which also correctly appears in Marx's manuscript.

Our analysis leads to the conclusion that the total process, or capital, is the unity of the processes of production and circulation, which is what Marx also asserts. This conclusion stems from the three 'functional' figures of capital. These figures show, moreover, that each form/function of capital appears in the total process as a starting, transitional and end-point. This dual result is, indeed, the one at which Marx arrives, although it does not correspond to the figures presented by him.

The contradictions in Marx's manuscript, and the difficulties resulting from them, disappear as soon as one adopts the 'functional' circuits we have just developed. Marx's conclusions are correct, but the discussions of which they are the fruit are obscure, if not incoherent. However, if one studies carefully the first three chapters, one sees that these 'functional' circuits are contrary neither to Marx's spirit nor to his text. Let us remind the reader that it is Marx who insisted, when analysing circuit I, that the transformation from C' to M' is a function of commodity capital, and that M' is just a passive form. Let us also remind the reader that it is Marx who highlighted the fact that the first C of this circuit is not the expression of a function of the capital under examination, but is rather that of another capital. Therefore, although he does not himself present the three circuits in a coherent way (in the fourth chapter), he authorises us to do so.

In fact, the 'functional' circuits are merely a transcription of the 'formal' circuits examined in the first three chapters of the second volume of *Capital*. This does not mean that this 'transcription' is of little importance since it is on the basis of this 'transcription' (more precisely on the basis of the 'syllogism' that it represents) that capital can be grasped in its internal organisation.

There is not the slightest doubt that Marx organises his thinking according to the Hegelian figures of syllogism. In a footnote published for the first time in the French edition of *Capital* edited by Maximilien Rubel, Marx writes:

In a review of the first volume of *Capital*, M. Dühring remarks that in my zealous devotion to the schema of Hegelian logic, I discover even in the form of circulation the Hegelian figures of syllogism. My relations with Hegel are very simple. I am a follower of Hegel, and the presumptuous and idle chatter of the epigones who think they have buried this eminent thinker seems to me entirely ridiculous. However, I have taken the freedom to adopt towards my master a critical attitude, to free his dialectic from its mysticism and to subject it thus to a profound change.⁶

6. Marx 1968, p. 528.

Marx never hides his sources. If, when analysing the circuits of capital, he has in mind the Hegelian figures of syllogism, this is because he is applying them. It is, therefore, necessary to examine these 'figures' more closely:

In the practical sphere, for instance, the State is a system of three syllogisms just like the solar system. (1) The *singular* (the person) con-cludes himself through his *particularity* (the physical and spiritual needs, which when further developed on their own account give rise to civil society) with the *universal* (society, right, law, government). (2) The will or the activity of the individuals is the mediating [term] that gives satisfaction to their needs in the context of society, right, etc., and provides fulfilment and actualisation to society, right, etc. (3) But it is the universal (State, government, right) that is the substantial middle term within which the individuals and their satisfaction have and preserve their full reality, mediation, and subsistence. Precisely because the mediation con-cludes each of these determinations with the other extreme, each of them con-cludes itself with itself in this way or produces itself; and this production is its self-preservation. – It is only through the nature of this con-cluding, or through this triad of syllogisms with the same terms, that a whole is truly understood in its organisation.⁷

Hegel presents us with a complex system of relations between three terms. If we designate the universal, the particular, and the singular [*Allgemeines, Besonderes, Einzelnes*], by the letters U, P, and S, respectively, this triad of syllogisms or relations can be written in the following way:

S and U connected by P
 U and P connected by S
 P and S connected by U

The idea underpinning this system of relations is rather complex. Let us attempt, by greatly simplifying, to briefly sum it up. The universal, the particular, and the singular, represent the 'State . . . in the practical sphere' or the government (the law, and so forth), the particular needs of individuals or civil society ('the world of economic relations' as one might put it today), and individuals or families. We know from *The Philosophy of Right* that Hegel's 'individual' refers to the family.

These three moments are those of the third section of this last work, entitled 'Ethical Life'. 'Ethical Life' is a notion resembling that of the *ἠθικός* of the Ancient Greeks. It refers to a realised and effective ethics, and not to a moral 'declaration' or good intention.

The family is the first moment of the 'Ethical Life' [*Sittlichkeit*], for family life is based on the merging of its members' volitions, the immediate coincidence of

7. Hegel 1991b, pp. 276–7; Hegel 1970e, p. 356.

the universal with the individual interest. The family – if it is, indeed, naturally constituted – is founded on the principle of love.

But the family is only one of the aspects of social life. It is an aspect that is negated and conserved in another, namely, civil society. The latter does not purely and simply eliminate the family, but it subjects one or several of its members to an order where each individual pursues their individual and selfish interests. Civil society, when examined on its own, is ethically inferior. Far from admiring the market and economic liberalism, Hegel denounces their detrimental effects: the excessive inequality of income, the excessive prices of products of basic necessity, and so on. And he does not confine himself to this moderate critique of the market, which is commonplace in our times. Hegel considers that the subsistence and well-being of every individual cannot be abandoned to the uncertainties of the market, for they constitute a ‘right’ that must be ‘*treated as a right and duly actualized*’.⁸

The state must, therefore, intervene in the economic field in order to embody the universal interest and correct the injustices generated by the blind forces of the market and selfish behaviour. The economic field must be governed by universal principles and rules.

If these moments constitute the three aspects of ‘Ethical Life’, they cannot be understood as separate and independent realities. They form an organic totality, so that each moment can only be really understood thanks to the others. The system of relations or syllogisms that we have just presented constitutes Hegel’s ‘formalisation’, enabling us to understand the various aspects of social life in their internal organisation, without eliminating their differences. As shown by the expression ‘the State . . . in the practical sphere’, that is, the state such as it appears in the economic sphere, the privileged field of this triad of syllogisms is, specifically, the economic field.

The first syllogism is a syllogism of the S-P-U type (or U-P-S, the order in which the two extremes appear is unimportant here). The empirical singular or the family is connected to the extreme of the universality through the mediation of economic life or ‘civil society’. The quoted passage from Hegel is not very explicit and can be interpreted in various ways. Each individual’s life in society, that is to say, life in a ‘functional’ and ‘efficient’ order governed by universal principles, is mediated by needs (P). But this syllogism can have a less trivial meaning: individuals, in order to realise their ethical nature in the economic sphere, the sphere in which they pursue their particular interests, must subject themselves (voluntarily) to universal rules.

8. Hegel 1991a, p. 260; Hegel 1970d, p. 382.

The second syllogism is of the U-S-P type. The universal, a reality that is in itself inert and abstract, must be mediated in order to acquire a concrete content in the economic sphere, whereas the singular, in order to maintain its ethical essence despite the particularity of its interests, must conform to the universal rules. If, therefore, one wants the satisfaction of economic needs (P) to be governed by universal and ethical principles (U), individual behaviour (S) in the economy must realise and make concrete these abstract principles.

The third syllogism is of the P-U-S type. It seems to us that this syllogism does not refer to the active intervention of the state within the framework of the law, which, by correcting the injustices generated by the market, ensures the well-being of individuals. It has a deeper meaning. Universal principles, which are the 'substantial' middle-term of the syllogism, consist neither of the good abstract institutions nor the subjective individual volitions, but rather consist of both at the same time. The universal is, therefore, present in the two extremes of the syllogism,⁹ as individual subjective volition, on the one hand, and as concrete activity within the economic sphere, on the other. Individuals, far from getting 'lost' in universal principles (to which they are supposed to subject themselves against their will), recognise in these universal principles their own rational nature, thanks to which life in society, or the effective satisfaction of physical and spiritual needs, is realised in a complete and developed form (*erfüllte Realität*), and conversely.

In the *Science of Logic*, we find the same system of relations, although the syllogisms appear in this work in a different order:

Similarly, too, the *government*, the *individual citizens* and the *needs* or *external life* of the individuals, are three terms, each of which is the middle of the other two. The *government* is the absolute centre in which the extreme of the individuals is united with their external existence [civil society]; similarly, the *individuals* are the middle term that activate that universal individual [the government] into external concrete existence and translate their moral essence into the extreme of actuality. The third syllogism is the formal syllogism, that of an illusory show, in which the individuals purport to be linked to this universal absolute individuality by their *needs* and external existence;¹⁰

This impenetrable language is obviously very different from that of *Capital*. However, if we take a closer look, we see that Hegel introduces us to a 'subject', or totality, which conserves and reproduces itself. To identify the relation of this subject to capital, it is enough to ask the following question: to what do the

9. The universal always designates the 'whole', the totality.

10. Hegel 1989, pp. 723–4; Hegel 1969b, p. 374.

moments of the concrete universality or the 'universal individual', of the particularity and the singularity, correspond?

We have already shown (Chapter Two) that money corresponds to the first moment and the commodity to the second. The moment of the singularity can only correspond to the productive unit. Obviously, the productive unit is far from being the site of the immediate merging of volitions, the site of the identification of the individual aims with the universal interest. It is, however, the site of the preliminary division of labour, and, therefore, of the immediate merging of the productive objectives. Like the singulars in Hegel's syllogisms, the productive units are dependent and their autonomy is relative. They 'go round' an 'absolute' or universal 'centre', for they are forced to conform to certain social norms. The process of production is, for Marx, the moment of the 'internal life' of capital, the moment when capital retreats into itself because it does not appeal to the market (the external life connecting it to the market, other capitals, and so on) in this particular form.

As in Hegel, in Marx money capital, commodity capital and productive capital are three terms – each one of which constitutes the middle-term of the other two: we can thus identify the exact correspondence between the two systems of relations:

<i>Circuits</i>	<i>Syllogisms</i>
I) M...P...C'	U-S-P
II) P...C'-M	S-P-U
III) C'-M...P	P-U-S

This is the syllogistic structure of capital, which, when understood, contributes to the solution of many of the problems raised by some of the interpretations of *Capital*. These interpretations are capable of specifying the 'contradictions' of *Capital*, but are incapable of grasping the necessity of these contradictions. Let us examine a characteristic example:

Only one of the following two things is possible: either private labours are socially united, and thus recognised, because of their diversity, and therefore of their concrete character. Or what unites them socially is their abstraction. How can one consider that things are socially useful as such, and therefore already social, before they have taken their social form?¹¹

11. Benetti and Cartelier 1980, p. 149. They write the cited passage in the framework of a critique of the first chapter of the first volume of *Capital*. Their critique is interesting because it grasps the chapter's contradictions. Since 'the end is the truth of the beginning', it seems to us legitimate to criticise them by using the cycles of capital.

In other words, either private labours are already socially united and recognised because they are diverse, that is to say, because of the particular character of commodities, or they are socially united because this particularity disappears in money. Nobody contests the fact that Marx refuses to choose between these 'two things'. But this contradiction is not arbitrary, but rather inherent to the very nature of capital.

This false alternative disappears as soon as we accept to take the dialectical perspective seriously.

If we concentrate on circuit III or the syllogism P-U-S, we see that commodity capital is connected to productive capital – and, therefore, the particular to the individual – through the mediation of monetary capital. This syllogism expresses, among other things, the simple idea according to which if the various units of production – and, therefore, the productive branches too – are socially connected, it is because they have already been subjected to the critique of money. Their momentary state is not the product of chance.

But this circuit on its own is unsatisfactory. In the second circuit, commodity capital is the middle-term that unites the process of production (the singular) and monetary capital (the universal). The commodity, by proving itself to be socially useful in its particular specific form, posits the private (individual) unit of production as a necessary part of the social division of labour. It, thus, identifies the individual with the social, the singular with the universal. This circuit shows, therefore, that the productive unit (its individual norms of production, and so on) does not correspond to the social norms or requirements in any immediate way. It shows that this correspondence is established through the intermediary of the particular commodity, which is the concrete result of the activities of the private firm: the sale of the commodity at a given price connects the individual unit of production to the social division of labour and indicates the 'degree' of this participation, as well as its social necessity. The particular commodity, when it acts as the middle-term, unites the singular and the universal, but while doing so it also keeps them at a distance: the two extremes do not immediately coincide. They constantly need to be mediated.

In circuit I, the process of production is the moment that mediates between money capital and commodity capital, between the universal and the particular. The process begins with the purchase of means of production and, therefore, with the functional form of monetary capital. Value is expressed in the form of monetary capital in the beginning of this circuit, which is the 'mobile' form of capital. In circuit II, the monetary form appears more as 'verification', since it does not condition the process from the very beginning. In circuit III, it appears more as 'sanction'. In circuit I, it appears as 'correction': money capital can be productively invested in a new cycle of the same industrial capital, in

the same way that it can only be partially invested. In this case, it will be passed on to some other industrial capital by means of the credit system. This circuit expresses the end-purpose of capital, which is the valorisation of value. Capital is productively invested with the sole purpose of individual enrichment. At the same time, this results in a constant readjustment of the social division of labour. Money as money is just a dead reality, in the same way that in Hegel the universal, in itself, is merely an inert reality. To become capital and be valorised, money must go through the circle of its transformations and, thus, abandon the form in which value is identical to itself.

Thus, we can already arrive at a better understanding of why social labour-time is divided up among the various productive branches in such a way that the particular labours executed independently of each other are constantly socially connected. This unmistakable fact is proof of a certain social connection between these individual labours. At the same time, this connection is equally constantly disrupted, verified and corrected: it is, therefore, not immediate. There are, therefore, some 'things' that are and are not social.

Benetti and Cartelier's critique is in line with a linear conceptual movement, from the 'before' to the 'after', and it is quite representative of other critiques directed at Marx. However, Marx's thought follows a cyclical movement, which conforms to the nature of capital. This conceptual movement does not escape contradiction, but is capable of bearing it. In the usual way of studying *Capital*, people look for identities where there can only be contradictions. The principle is well-known: 'one of two things', 'either one or the other', and so forth. This principle is not wrong when dealing with arbitrary contradictions. But the contradictions in *Capital* are not arbitrary. Each form of syllogism is and must be simultaneously the critique and the development of the other two. In Marx, there is no 'discourse' devoid of contradictions aiming at the approximate representation or reproduction of the real object. There is, in Marx, the contradictory discourse of the subject/object itself, of its own language or dialectic.

Capital is defined as the subject, whose every member is a starting, transitional and return point; as a cyclical movement, whose every moment constitutes its presupposition, means and product. The result is that the three particular circuits of capital are organically linked in such a way that the normal repetition of the one implies the normal repetition of the other, that they compose an inseparable unity, a single movement, a circle of circles. In reality, these circles not only intersect in time, but also unfold in parallel to one another. While emphasising the reproduction of social capital, Marx opens the way for a non-monocausal explanation of capitalist crises:

The total circuit presents itself for each functional form of capital as its own specific circuit, and indeed each of these circuits conditions the continuity of

the overall process; the circular course of one functional form determines that of the others. It is a necessary condition for the overall production process, in other words for the social capital, that this is at the same time a process of reproduction, and hence the circuit of each of its moments. Different fractions of the capital successively pass through the different stages and functional forms. Each functional form thus passes through its circuit simultaneously with the others, though it is always a different part of the capital that presents itself in it. A part of the capital exists as commodity capital that is being transformed into money, but this is an ever-changing part, and is constantly being reproduced; another part exists as money capital that is being transformed into productive capital; a third part as productive capital being transformed into commodity capital. The constant presence of all three forms is mediated by the circuit of the total capital through precisely three phases.¹²

In this passage, it is very clear that Marx is thinking on the basis of the three 'functional' circuits, or the three Hegelian syllogisms. These syllogisms present more than just a purely 'philological' interest. In Marx, social capital is not simply the sum of the values of individual capitals. Social capital, society's abstract labour, is a subject/object that reproduces itself as the identity of the identity (abstract labour) and the non-identity (concrete labour). Social capital, or abstract labour, is 'in itself' in society's money capital, since only in this form does it exist in an immediate way. We could, therefore, say that this capital, in order to reproduce itself, is externalised or differentiated from itself in a series of concrete (abstract) labours that can be distinguished from each other through their particularities (the produced commodities). Money capital, a mobile and immediately social form, is the moment of the concrete universality of social capital, its 'being at home'.

In order to be valorised, in circuit I, social labour-time – here embodied in a monetary form – introduces a division, a differentiation, within itself. This enables the production of particular commodities of a greater value than the initial value. In circuit II, the social capital that has been divided in this way comes back to itself through the intermediary of particular commodities. It conserves itself. Finally, in circuit III, social capital connects its two extreme moments by a sort of auto-critique and self-control. This circuit expresses the idea that social capital, in its monetary form, is not lost in its own extreme moments, for the latter are subject to its permanent control. Each productive unit enjoys a relative autonomy in relation to the social norms of production and consumption, but no productive unit is ever independent from them.

12. Marx 1978, p. 184.

Social capital thus defined is a triple autonomous movement. It is a movement of valorisation, conservation and auto-critique/self-control of value.

The first movement refers to the rate of exploitation of the active working-class and the organic composition of capital. The rate of valorisation of social capital depends on these.

The second movement refers to the total abstract labour time of society, to the number of hours of social labour spent during given time periods, the only measure of 'bourgeois wealth'. If the number of hours of living labour of a given period, for example, decreased in comparison to the dead labour that it operates, then the same quantity of living labour of the period under examination would find expression in an increasing quantity of commodities. If, therefore, material production, at the beginning of a new circuit of productive capital, does not increase proportionately, the value of this capital will be smaller than the value of the same capital at the beginning of the previous cycle. Value will grow smaller from P to P . In order to produce the same quantity of commodities as before, with the same value in constant capital (which increases in terms of mass), less living labour time is needed. It is the latter, however, which is the only measure of produced wealth.

The third movement expresses both the valorisation and the conservation of value, inseparable from each other and dependent on solvent social needs, that is, on favourable or unfavourable market conditions. We have characterised this movement as a process of auto-critique and self-control of capital. At the same time, this is a conceptual movement of 'reconciliation' of the previous circuits. The rhythm of 'profit yielding' (circuit I) and 'reproduction' of capital (circuit II) are interdependent. At any given moment, certain relations of proportionality must be respected. There is, therefore, a relation of 'tension' between the two, a relation that is 'bearable' for as long as sales markets prove to be sufficient and the domestic and foreign markets absorb the commodities (values) produced.

These processes enable us to interpret the organisation of capital as a rich and complex organisation of rhythms. As Marx puts it, the three functional forms act simultaneously, but their simultaneity is the work of their succession. The three circuits must be interpreted, not simply in 'lines' but also 'columns', the former representing the temporal successiveness and the latter the spatial simultaneity. The relations of 'simultaneous' proportionality of the three forms are fluid and variable, but they are not accidental. At each moment certain proportions must be respected.

There is both little and a lot that can be said at this point about these proportions. They reflect the smooth or problematic unfolding of the three processes. Social capital must, at the same time, be valorised, reproduce itself (in terms of the living labour spent during certain given time periods), and find the necessary sales markets for the realisation of its value. These three processes of capital form

a unity, an organic totality. However, there is nothing more contradictory than this totality. The higher the rate of valorisation of social capital, the more the reproduction of capital becomes difficult and the sales markets become scarce. If, however, the rate of valorisation is too weak, less capital is invested and sales markets are less abundant.

On the basis of his analysis of capital as the unity of these three cycles, Marx opens the way for a rich explanation of crises. This explanation is not confined to the specific pattern in which unfolded the crises of overproduction of Marx's time. The reversal of the economic conjuncture can result from various causes, and the chain of cause and effect can vary in time and space.

Capital thus conceived is an autonomous organisation of rhythms, and the crisis of the social organism is a kind of 'arrhythmia', that is, a momentary disturbance of the system's coherence. This way of looking at things enables us to go beyond the usual static representations of the equilibrium.

The rhythmic movement of the economy, like any rhythmic movement, implies certain 'rules' (forms of competition and credit, forms of state intervention, compromises between social classes whether institutionalised or not, social habits, international relations, and so on), and these rules can vary in time and space. *Capital* is neither a complete theory of capitalism nor a theory reserved for certain historical periods (even if it bears the signs of one of them). Instead, it is a coherent system of determinations, a system capable of evolution, self-development and concretely materialising time and again in historical space and time, without losing its internal coherence. From this point of view, it also bears the sign of completion. It bears in it the principle of its evolution; for what changes is not the totality, the overall organisation, but the relations between its constitutive elements.

The whole of capital is in the first chapters of the second volume of *Capital*, although in an implicit form. In the text of those chapters, everything is there in an abstract language that is difficult to 'decode'. What does it need in order to become clear and concrete? Firstly but not only, it lacks a range of categories belonging to the temporality of circulation. Thanks to these, the relations of proportionality referred to above will become clearer.

The analysis of capital from the last period of Marx's life seems to prove his 1858 intuitions right: 'The exact development of the concept of capital [is] necessary, since it [is] the fundamental concept of modern economics, just as capital itself, whose abstract, reflected image [is] its concept [*dessen abstraktes Gegenbild sein Begriff*], [is] the foundation of bourgeois society. The sharp formulation of the basic presuppositions of the relation must bring out all the contradictions of bourgeois production, as well as the boundary where it drives beyond itself'.¹³

13. Marx 1973, p. 331.

Chapter Twelve

Capital in Marx, or 'Life' in Hegel

Dogmatic claims and fixed ideas have been, in France and elsewhere, an important obstacle to the understanding of the real meaning of the concept of capital. The Hegelian dialectic is supposed to be, according to these analyses, profoundly incompatible with the Marxian method. The former is 'idealist' and 'mystical', while the latter is 'materialist' and 'enlightened'.

But if one does not accept these claims, which have not been corroborated (nor can they ever be), one sees that capital as subject/object is the 'Idea' that contains in it and sums up modern political economy in its totality. For, as Hegel puts it, *'that which is for organic being cannot be alien to it'*.¹

Marx is not fond of pointless phrases. By repeating throughout the three volumes of *Capital* that capital is a life, by speaking of the 'members of capital', 'cycles' [*Kreislauf*], 'internal organs of capital', and so on, Marx makes the connections between his proposed theory of capital and Hegel's 'logical' life. It is hardly necessary to note that the term 'organism' in Hegel refers to a logical order of things and not to 'biology', even if the model to which he refers is the living organism.

If one opens the second volume of the *Science of Logic* at the first chapter of the third section of the 'doctrine of the Notion', one will see that this chapter is entitled 'Life'. This chapter belongs to the section dedicated to the 'Idea', the last section of the *Science of Logic*.

1. Hegel 1970j, p. 42; Hegel 1970f, p. 369.

12.1 The Hegelian 'Idea' (generalities)

The very title of the section requires some clarification. In Hegel, the term 'Idea' does not correspond to its usual usage. The 'Idea' is neither the subjective representation [*Vorstellung*] of a reality, nor the 'theorisation' of an empirical reality or an experience [*Erfahrung*]. Therefore, it cannot be characterised as 'good' or 'bad', 'just' or 'unjust'.

The 'Idea' is, in Hegel, that which is 'objectively *true*', or, if we prefer, the '*true as such*'.² The content of the 'Idea' is extremely complex, but by simplifying a lot, we can say that the 'real object' possesses in Hegel the traits of 'subjectivity' [*intellectus*] and those of 'objectivity' [*res*], and that this object is, in its truth, the unity of its traits [*adaequatio rei et intellectus*]. The 'Idea' is nothing other than this unity. Hegel writes the following:

It is not merely that the object, the objective and subjective world in general, *ought to be congruous* with the Idea, but they are themselves the congruence of Notion and reality; the reality that does not correspond to the Notion is mere *Appearance*, the subjective, contingent, capricious element that is not the truth. When it is said that no object is to be found in experience that is perfectly congruous with the *Idea*, one is opposing the Idea as a subjective standard to the actual; but what anything actual is supposed in truth *to be*, if its Notion is not in it and if its objectivity does not correspond to its Notion at all, it is impossible to say; for it would be nothing.³

Hegel's 'reality' is not the material reality, the experience [*Empirie*] or the raw fact; in short, whatever remains in the form of 'residue' after we create conceptual systems. It is the objective side of thinking, the 'objective' determinations produced by it.

Certain illustrations of this logical order of things (the conformity of reality to the Notion) risk, however, leading us away from the real problem: what is a state, for example, that does not really fulfil its functions, if not a state only in appearance? Obviously, a 'state' that does not conform to its Notion is not a state, for nothing allows us to define it as such. Man gives himself laws that he obeys, for if he does not obey them, these laws are nothing at all. Hegel would say that it is 'correct' [*Richtig, Richtigkeit* = correctness] for the worker to be able to freely choose a craft, but it is not true. How many workers are unable to give a real (objective) content to this right? There exist, therefore, some entities where 'being' and 'must be' are inseparable, although they are not identical. However,

2. Hegel 1989, p. 755; Hegel 1969b, p. 462.

3. Hegel 1989, p. 756; Hegel 1969b, p. 464.

it seems to us that the essential part of the Hegelian problematic is to be found elsewhere.

In the usual way of thinking about things, there is the world of thought, on the one hand, and the real and objective, empirical, world, on the other. These two worlds do not constitute two separate entities, but rather form a whole divided into two poles, governed by purely external relations. The categories of thought appear, in these two worlds, as empty drawers of different sizes and forms in which the objective world of experience [*Empirie*] obediently settles down. But who produced this dual world where the multiple and the ephemeral come in search of their place in the unity and the Notion, were it not thought itself? And according to which criteria have we developed our taxonomic and classificatory drawers ('national accounts' are one illustration of this) for fitting into them an external reality that is in its nature hostile and rebellious towards any attempt at systematisation?

Hegelian logic rebels against this dual vision of the world. On the basis of its own forces and its immanent criteria, the Notion is the only entity capable of producing valid contents, of reproducing and developing itself. But this production is not only subjective and subjectively conceived. It is also real and existent: it gives itself an objective content by creating the logical determinations of the existing world. For what is it that we are looking for in the objective world, including in nature, if not systems, coherence or the laws of reason? And how can we look for these laws if we do not know, *a priori*, whether they are valid according to their own immanent criteria? There is nothing more boring and useless for science than the description of raw fact, of the immediate concrete.

But the empirical and extra-conceptual world is not reduced to a passive role in Hegel. Thinking seeks its own laws in phenomena, but these same laws are already present in these phenomena in the form of potential logical human laws. If, on the one hand, thinking – an orderly and structured totality – creates the determinations of the existing world, on the other hand, the existing world must conform to its understanding. Yet the existing world, by proving to be alien to systematisation, shakes thinking and keeps it awake. This reality, the 'other' of the Idea, is the principle that stimulates 'memory'. Hegel appropriates some of Plato's ideas and writes that all 'knowledge' is the awakening of 'memory' [*Erinnerung*], not in the sense of a 'return' of what already existed in consciousness, but in the sense of a self-development of the hidden capacities of thinking.⁴ The 'other' of the Idea exists in it negatively, in the manner of a gap that is at the same time a tendency [*Trieb*] towards its bridging.

4. Hegel 1991b, p. 238; Hegel 1970e, p. 309.

Thus, the Idea is the correspondence of reality to the Notion – ‘their contradictory unity’, as Marx would have probably put it – but it is not their formal identification. There exists a relation of communication and tension between the two poles and it is precisely this relation that renders them simultaneously inseparable and separate. The Idea is, thus, defined as an eternal process, the process by which the Notion and reality are made to correspond. Hegel writes that ‘the Idea is essentially *process*’.⁵ This means that it does not stand above contradiction, despite being capable of bearing it and taking advantage of it.

The real object is true as ‘Idea’, but this does not mean that the previous spheres of ‘Logic’ are purely and simply eliminated. Hegel writes that ‘Being’ is ‘true’ because it now appears as the unity of reality and the Notion, thus being what the Idea is. He specifies that ‘finite things’ (ephemeral) are finite because they do not entirely possess ‘the complete reality of their Notion within themselves’, and this is the case to the extent that they do not conform to the Idea. This non-conformity to the Idea is their aspect of ‘*finitude*’ or ‘*untruth*’, an aspect that situates them in the previous spheres of Logic.⁶

Our ‘finite’ objects are the commodity and money (and commercial capital) when examined independently of capital. Indeed, they possess an aspect of ‘untruth’ and ‘finitude’ in the sense that they lack the moment of reproduction. Historically, both the commodity and money – before the appearance on the stage of history of the point of view of their values and capital – are objects that are not entirely determined. Value is and is not a social relation. As Fausto correctly notes, it has ‘a similar status to that which any being has at its pre-historical stage. At this stage, a being does not exist as subject. A pre-history is precisely the history of a being’s rise as subject. However, there exist, in the pre-historical stage, certain determinations that express but at the same time do not express this being. That means that certain determinations exist that express this being (absent as subject) in a negative and contradictory form’.⁷

What has been said of the pre-history of value can also be said of the simple circulation of commodities in capitalist conditions of production, but examined independently of the process of production. The simple circulation of commodities has something ‘finite’ and ephemeral in the conceptual development of *Capital*. It is the proof of a relation of equality between men, of an exchange of equivalents resulting from the free will of the agents involved in the act of exchange, each one of them acting for his interests, and everyone acting for the common interest. ‘Freedom’, ‘Equality’, ‘Property’ and ‘Bentham’, Marx writes

5. Hegel 1991b, p. 290; Hegel 1970e, p. 372.

6. Hegel 1989, p. 757; Hegel 1969b, p. 465.

7. Fausto 1986, p. 143.

ironically⁸ – a world of universal values and pre-established harmonies. The simple circulation of commodities hides the relation of exploitation and economic inequality between social classes; such relations are necessary, however, for understanding the nature of this circulation. Simple circulation, as shown by the three circuits of capital, is merely a moment of the *Kreislauf* of capital. One can find in *Capital* the traces of a logical self-development of the Notion, for it is by the cumulative elimination of error or partial truth that we come closer to a global vision of what is real. But we should not spend any more time on this point.

Since we will have the opportunity to return to this global vision (in chapter 24), let us move on to 'Life' or the 'immediate Idea', which deserves the greatest attention of the economist and the reader of *Capital*.

12.2 Hegelian 'Life' and the circuits of capital

Hegel also deals with the issue of life in his *Encyclopaedia*, and he does so on two occasions: in volume I whose object is 'Logic' (from §216 to §222), and in volume II devoted to *The Philosophy of Nature*, in the third chapter of the third section, entitled 'The animal organism' (from §350 to §375). Therefore, we have two additional references that will prove useful for understanding Hegel's theory of the organic being.

In both references, one finds the philosopher's fundamental thesis according to which life is 'Idea'. Hegel writes that the living being, far from being incomprehensible [*unbegreiflich*], is comprehension itself, or the Notion that has reached the stage of existence.⁹ Everything that is alive is a subject/object, the unity of subjectivity and objectivity of which we spoke above. The universality of thought (soul) and the particularity of things (body) form a dynamic unity in movement.

The subject 'idealises' the diversity of its 'objective being', in which it is omnipresent as soul, as universality, and for which the juxtaposition of matter is devoid of truth. Thus, the living being in its divisibility and external or phenomenal diversity remains one and indivisible: it is 'the simple oneness [*das einfache Einssein*] of the concrete Notion with itself'.¹⁰

In *The Philosophy of Nature*, it appears, perhaps more clearly, that the issue here is one of a dual 'idealisation' that could be qualified as temporal and spatial.¹¹

8. Marx 1976a, p. 280.

9. Hegel 1991b, p. 291; Hegel 1970e, p. 374.

10. Hegel 1989, p. 763; Hegel 1969b, p. 472.

11. As Herbert Marcuse remarks in his 1987 book *Hegel's Ontology*. Those interested in the notion of time in Hegel will find some very interesting ideas in Marcuse's book.

Thus, we can read in an addition to §350 that living subjectivity denotes that the living being ‘remains in itself’ and ‘maintains itself as universality’, although it continually changes. But to this temporal idealisation should be added a spatial idealisation, since the members of the organism are not its parts but are what they are only in the organic unity. They are, therefore, constantly ‘summed up’ in this unity. This is the reason why the phenomenon of life, ‘the highest point of nature’, is ‘the absolute idealism’.

Paradoxical as it might seem, Marx, the materialist, defines capital in a similar way:

Capital, as self-valorizing value, does not just comprise class relations, a definite social character that depends on the existence of labour as wage-labour. It is a movement, a circulatory process through different stages, which itself in turn includes three different forms of the circulatory process. Hence it can only be grasped as a movement, and not as a static thing. Those who consider the autonomization [*Verselbstständigung*] of value as a mere abstraction forget that the movement of industrial capital is this abstraction in action.¹²

In fact, ‘abstraction in action’ or ‘immediate idea’, ‘autonomization of value’ or ‘Notion that has reached the stage of existence’, at the logical level present only purely terminological differences. It is not at all by chance that in Marx one finds three figures of the cyclical process forming a unity, a single movement, a single total process:

The living being is the syllogism whose very moments are inwardly systems and syllogisms . . . But they are active syllogisms, or processes; and within the subjective unity of the living being they are only *One* process. Thus, the living being is the process of its own con-cluding with itself, which runs through *three processes*.¹³

The ‘moments’ of the living being discussed by Hegel are the moments of the Notion: the universality as soul, the particularity as body [*Leiblichkeit*], and their unity as singularity: ‘the reality and basis of the first two moments’.¹⁴

Therefore, the subject possesses a universal and a particular aspect, the unity of which can only be conceived of as the reproduction of the individual organism (reproduction meaning here the maintaining of oneself, conservation of the organic): the soul and the body – one thanks to the other – resist the separation, that is, death.

12. Marx 1978, p. 185.

13. Hegel 1991b, 292; Hegel 1970e, p. 374.

14. Hegel 1970j, p. 109; Hegel 1970f, p. 437.

In Marx – from the *Grundrisse* onwards – capital possesses a universal and a particular aspect, value and use-value, the commodity and money, and capital itself is the unity of these in movement. Far from being 'commodity and money alternately', capital is rather 'the alternation of both these roles':¹⁵ it appears 'as the subject [*Subjekt*] for whom the extremes are merely its moments, whose autonomous presupposition it suspends in order to posit itself, through their suspension, as that which alone is autonomous'.¹⁶

Marx did not distance himself from this way of looking at things, but, on the contrary, in *Capital* he gave it a much more concrete and profound content. What is it that value lacks, such as it appears in simple circulation, in order to become a living subject, namely, capital? It lacks the principle of its renewal, that is to say, the moment of reproduction. In an immediate manner, therefore, it lacks the process of production *stricto sensu*, the simple moment of the singularity. However, as in any living organism, no member is conceivable with itself as the starting-point (taken separately from the others); the 'part' must necessarily contain the entire totality: not only are the parts in the organism, but the organism is in each member. Thus, each one of the three determinations can only be distinguished from the other by its 'relative dominance'. For example, productive capital is capital because it is already (ideally) commodity capital and money capital, and these forms are capital because each one of them contains the two others (otherwise they would be simple commodity and simple money). The circuits of capital in reality describe only this unfolding of the Notion that takes itself as the starting point, the manner in which each determination passes in the two others, so that the totality exists as the result of these processes: Hegel writes that 'living existence has being, and preserves itself only as this reproductiveness, not as mere being. It has being only because it turns itself into what it is. It is a pre-existent end, and is itself merely result'.¹⁷

This teleological process of reproduction is divided – in Hegel – within itself into three distinct and united processes, which we have mentioned above. Indeed, capital – like the living being in general – 'is a pre-existent end, and is itself merely result', an organism that exists and is maintained by reproducing itself.

This is why we find in Marx three forms of the circular process of capital. These forms correspond to 'Shape', 'Assimilation' and the 'Genus-process'. These processes constitute, in *The Philosophy of Nature*, the three subdivisions of the chapter devoted to 'the animal organism'. In the *Science of Logic*, the chapter entitled 'Life' is also organised around three points dealing with the 'living

15. Marx 1973, p. 261.

16. Marx 1973, pp. 331–2.

17. Hegel 1970j, p. 107; Hegel 1970f, p. 435.

individual', 'the life process' and 'the genus'. These three points correspond to 'Shape', 'Assimilation' and the 'Genus-process'.

12.3 'The living individual' or 'Shape' and the circuit of productive capital

The first of them is the process of the living being *inside* itself. In this process it sunders itself and makes its corporeity into its object, or its *inorganic* nature. As what is relatively external, this inorganic nature enters on its own part into the distinction and antithesis of its moments, each of which abandons itself to the others, assimilates the others to itself, and maintains itself by self-production.¹⁸

Although this process (like the other two) deserves a lengthy commentary, let us limit ourselves to a cursory explanation. Each individual organism has a relatively independent existence, in which life or the genus are 'incorporated' (the individual dies, it is separable from life). The genus or the soul are an 'internal end-purpose' (immanent to the individual) that consists in a process of conservation of the individual. This means that the division of the individual body into organs or corporal systems is teleological. It is governed by this internal end-purpose. This division becomes manifest in a 'division of tasks' between these organs, which communicate and co-operate in order to maintain the whole. The soul in question here is not a theological notion. It expresses a rather simple idea, namely, that the organism is unmistakably a 'totality', and – as every totality – it cannot be considered as being composed of parts that steer clear from each other, but as a set of 'functions' (the 'relatively external' side of the process) governed from 'within' in order for the organism to maintain itself. The living individual 'lasts' as long as the 'inorganic nature' (its material aspect) present in it is subject to this internal end-purpose, to the extent that the former serves as a 'means' for the latter. In this way, the individual is not an inactive thing, but is instead a movement of auto-production where 'each member is interchangeably both end and means, and maintains itself by virtue of the other members, and in opposition to them'.¹⁹

This process corresponds precisely to the cycle of productive capital: P . . . C'-M or P . . . C'-M'-C . . . P. In the process of production *stricto sensu*, we find once more the 'internal end-purpose' mentioned above. One need not make any effort in order to discover its real content, since this content is obvious: the division of productive tasks as well as of the means of production – the relatively external

18. Hegel 1991b, p. 292; Hegel 1970e, pp. 374–5.

19. Hegel 1970j, p. 132; Hegel 1970f, p. 459.

side of the process, the visible aspect – is neither accidental nor determined once and for all. It is quite simply subject to the logic of value, which is the internal end-purpose of capital. The historical development of productive techniques obeys this 'internal rationality', which is only visible to the eyes of the mind.

But what must be emphasised is the cycle of productive capital more than the process of production, for it is the former that describes the real movement of conservation of capital. Capital possesses three functional forms; these are its 'members', and they 'maintain [themselves] by virtue of the other members, and in opposition to them'. We have already shown, when examining this cycle, that it reflects neither the fact that capital produces surplus-value nor the fact that it depends on sales markets. We will not revisit this here. These last two properties of capital are obviously present in this cycle, but only implicitly. Incidentally, this is why Marx describes three processes and not just one. In this process, value as end-purpose shows one of its properties. It goes through different 'corporeal' forms without getting lost in this movement, which, on the contrary, describes the mode of its conservation.

12.4 The 'life process' or 'Assimilation' and the circuit of commodity capital

The process of the individual within himself or Shape is an 'abstract process'.²⁰ The latter is characterised as 'abstract', it seems to us, because the individual is taken to be an autonomous existence, as if the individual lived outside of any relation with an inorganic external world. This is the relation that must now be examined. It is essentially this 'exteriority' of the objective world in relation to the individual that will be contested and put into perspective.

The objective and presupposed world – the 'external condition and material'²¹ of the living being – is set against the latter as an 'otherness' [*Andersein*].²² Thus, the living being finds itself in a 'state of tension'²³ in relation to this world, for the latter is, more specifically, the 'otherness' of the organism, an external thing that belongs, however, to the organism and is part of its own determination. The relation of the organism to its environment can as a consequence be specified as a relation of exteriority of the organism towards itself.

20. Hegel 1970j, p. 131; Hegel 1970f, p. 459.

21. Hegel 1970j, p. 136; Hegel 1970f, p. 464.

22. Hegel 1989, p. 770; Hegel 1969b, p. 480.

23. Hegel 1970j, p. 136; Hegel 1970f, p. 464.

The living being is thus determined as the 'unity of itself and its specific antithesis'.²⁴ As a result, the former is the 'absolute *contradiction*'.²⁵

This contradiction is immanent to the subject. However, the subject has the capacity of 'bearing' it. It is precisely this that accounts for its 'infinity'. With this last term, Hegel wants to draw our attention to the fact that the subject does not have any real limits, that is, it transforms its own limits and negations into positive affirmations: desire and need do not constitute, for Hegel, only limits, negations of the subject, but also positive affirmations. These determinations can be considered as simple negations only if one thinks of the living being as an inert reality, as 'being' and not as 'a pre-existent end, [which] is itself merely result'. According to Hegel, 'nothing whatever could have a positive relation to living being, if living being in and for itself did not constitute the possibility of this relation, that is to say, if the relation were not determined by the Notion, and therefore not simply immanent in the subject'.²⁶

The living being can be grasped as a teleological activity, an activity of realisation of desires and the satisfaction of needs whose result is nothing other than the conservation of the subject itself through 'assimilation' of the external environment. The living individual is, thus, determined as the activity of the negation of its negation, the activity of the negation of its limits, its 'finitude', as its own end and as 'infinite self-reference'.²⁷ This is why '*that which is for organic being cannot be alien to it*'.²⁸ This means that the 'being-another' of the organism is already part of its own determination, in the same way that the being-another of the commodity or money, for example, is already part of its own determination. This activity can be conscious or unconscious, for the 'instinct is purposive activity [*Zwecktätigkeit*] operating in an unconscious manner'.²⁹

When we are aware of these Hegelian theses, we will encounter no particular difficulties in grasping the assimilation process:

The process which is of real nature, or the [subject's] practical relationship with inorganic nature, begins with the self's internal diremption [division, break-up], the awareness of externality as the negation of the subject. The subject is, at the same time, positive self-relatedness, the self-certainty of which is opposed to this negation of itself. In other words, the process begins with the awareness of deficiency, and the drive to overcome it. The condition which

24. Hegel 1970j, p. 141; Hegel 1970f, p. 469.

25. Hegel 1989, p. 770; Hegel 1969b, p. 481.

26. Hegel 1970j, p. 142; Hegel 1970f, p. 469.

27. Hegel 1970j, p. 141; Hegel 1970f, p. 469.

28. Hegel 1970j, p. 42; Hegel 1970f, p. 369.

29. Hegel 1970j, p. 145; Hegel 1970f, p. 473.

occurs here is that of an external stimulation, in which the negation of the subject which is strung in opposition, is posited in the form of an object.³⁰

Let us note that the 'certitude' [*Gewissheit*] discussed by Hegel is that of the superiority of the organism when compared to the inorganic: nature in itself not being anything,³¹ rather, it is merely for the subject.³² However, nature is external to the subject. It is the subject's 'being-another', a negation of the subject that is manifested in it as a gap, and, at the same time, as an impulse to bridge this gap through assimilation of the objective world. All prosaic processes of life (such as nutrition) are processes of assimilation of this kind.

But what is the link that can exist between the relation of the subject to nature and capital? Capital, like any organism, is in a relation with the external world. It presupposes an objectivity, 'an inorganic nature'. This nature is the inorganic nature of sales markets, of social needs that are the principle of the 'stimulation' of capital. The historical role of foreign sales markets in the development of the capitalist mode of production has undoubtedly been crucial. Foreign sales markets are becoming, with the current crisis, progressively more important.³³ When one thinks of the recent political events in some centrally planned economies, foreign sales markets constitute one of the possible although improbable scenarios of an end to the crisis.

On the basis of Hegel's ideas as sketched out above, one can also be more specific about the autonomy of capital as a social relation. Social needs are, for capital, an 'inorganic nature'. They do not exist as such for capital, but only to the extent that they have a relation of causality with capital, namely, to the extent that they constitute sales markets, solvent social needs, set against capital in the manner of an object (money). This is why man as producer, but also consumer, is reduced to an object, to a thing which does not have value as such, but only in relation to capital. It is thus that, in certain circumstances, the overproduction of commodities and the most extended degradation of the living conditions of certain social groups are two phenomena that are not only compatible but also interdependent. This is why 'fetishism' and 'alienation' are not 'coquetties', but absolutely necessary notions for the real understanding of the nature of value and

30. Hegel 1970j, p. 141; Hegel 1970f, p. 468.

31. 'Gewissheit der an sich seienden Nichtigkeit des ihm gegenüber stehenden Andersseins'; Hegel 1969b, p. 480.

32. The relation between the subject and the external object is a relation of domination, but it is also a relation internalised by the subject: nature is a part of it. Thus, Hegelian thought does not lead to a 'romantic' ecology (devoid of valid and verifiable foundations), or to a relation of destructive exploitation between the subject and the object.

33. The political events in East Germany, in the autumn of 1989, on their own immediately resulted in a rise in the value of the stocks of the automobile industry in West Germany, especially of Volkswagen. The mere visit of Gorbachev in 1989 to West Germany resulted in a rise in the value of Siemens's stocks.

capital. Fetishism does not designate 'the discrepancy between the spontaneous representation of the agents and their real relations', which would mean that it would not have 'anything that cannot be overcome', as Bidet puts it in a recent work.³⁴ Before appearing as an ideology, fetishism is the dialogue between the commodity and money, the dialogue between value and itself, which organises social life, without asking either the workers for their opinion, or – in the last analysis – the businessmen for theirs.

The process of assimilation is defined as the process of reproduction or conservation of the organism that begins with the internal conflict of the subject (which is that of its relation with its exterior), and finishes with the periodic overcoming of this conflict by means of the mediation of the instinct and thanks to the internalisation of the external object. It is the process of the negation of the negation of the subject, the momentary overcoming of the non-correspondence of its 'being' with its 'having to be'.

This process corresponds to the cycle of commercial capital: C'-M...P, or C'-M'-C...P...C'. In examining this cycle, we have emphasised the importance Marx attached – rather abruptly – to the question of consumption, that is, to the question of sales markets that are external to each individual capital. This consumption does not formally appear in any cycle.

The process of assimilation not only indicates the origin of circuit III of capital, but also enables us to better grasp the meaning of some of Marx's expressions that have very often been badly or insufficiently interpreted. Why does use-value, the bearer of value, contradict the value that it bears? Quite simply, because the commodity cannot be understood while it is immobile. Money is already part of its own determination, while facing it as an external element. It is this relation of tension with the 'external world', which is, at the same time, an 'internal split' of the commodity that Marx rightly calls 'contradiction'. Despite the opinion according to which contradiction is unthinkable, the feeling of shortage or 'pain' is, in Hegel, its ontological proof, so to speak.³⁵

Like the commodity in the previous cycle, money in the cycle C'-M...P must not be seen as simply a duration during which capital fulfils one of its functions. It is the latter, but it is also the phenomenal form of the exchange-value that is already present in the commodity. This value enables the purchase of means of production and labour-power. Money – like any mediator in general – refers both to its past and to its future, and it is in itself more than a simple 'present' (because money capital, for example, can in its immediacy merely fulfil the function of money). As Hegel puts it when speaking of the syllogism, 'the mean is the identity which in a supreme degree makes them [the extremes] one;

34. Bidet 1990, p. 230.

35. Hegel 1989, p. 770; Hegel 1969b, p. 481.

the conclusion is thus speculative, and in the extremes unites itself with itself, because all the terms pass through all the different positions'.³⁶

12.5 The 'Genus-process' and the circuit of money capital

We have already noted that the valorisation of capital resembles more a theological 'insemination' than a biological one: capital 'differentiates itself as original value from itself as surplus-value, just as God the Father differentiates himself from himself as God the Son, although both are of the same age and form, in fact one single person'.³⁷ Despite this formal difference, the 'Genus-process deserves to be presented.

The genus exists, in its immediate simplicity, in the singular. This means, quite simply, that when one thinks of genus, the universal, one is forced to admit that the latter exists in reality in the individuals that represent it. In the opposite case, it would only be a pure abstraction without a real content, a mere dictionary definition: 'though the individual is indeed *in itself* genus, it is not explicitly or for itself the genus'.³⁸ Why? Because the genus is the identity of the individual with the others of the same genus. This identity, which is its universality, exists first in the genus only in an esoteric or subjective way and demands to be posited and realised. According to the philosopher, that is where the 'instinct of the genus' stems from. This instinct is nothing other than the sexual desire and the instinct of reproduction. In the above discussion, there is the idea of a non-correspondence of the genus with itself due to its imprisonment in singular realities. This contradiction is overcome through the mediation of the sexual relation, through which a new individual is given birth to and the genus is perpetuated.

Individuals die and are born, but the genus remains. The latter enters as a result, so to speak, into a private relation with itself. This is why the process examined is that of 'the auto-mediation of the genus with itself'.³⁹ This relation of the universal with the universal is, in Hegel, the idea of knowledge and the starting-point of the spirit.⁴⁰ This rather paradoxical conclusion can be accepted or rejected, but it is not absurd: the negation of life is, at the same time, the negation of death and, therefore, the birth of immortality and eternity: the 'beyond' of life and death is also the 'beyond' of 'biology' that one can call 'spirit'. The idea is a process without end, but a process that 'remembers' the states of its evolution and its own trajectory, and lasts eternally, whereas 'extra-conceptual' things

36. Hegel 1995a, p. 75; Hegel 1971b, p. 90.

37. Marx 1976a, p. 256.

38. Hegel 1989, p. 773; Hegel 1969b, p. 485.

39. Hegel 1970j, p. 193; Hegel 1970f, p. 520.

40. Hegel 1991b, p. 294; Hegel 1970e, p. 377.

as such disappear. And it is because the latter die that the spirit is immortal. It seems we must interpret this curious birth of the spirit in this way.

This process corresponds to the circuit of money capital $M \dots P \dots C'$ or $M-C \dots P \dots C'-M'$. It might seem comical to compare sexual relations with the relations between social classes. Nevertheless, this would be a misunderstanding of the exact meaning of the Hegelian ideas presented above. The living organism is, in reality, an illustration of specifically logical processes.⁴¹ The three processes show how a structured and orderly totality – not despite its contradictions but thanks to them – conserves, reproduces and develops itself. We could, therefore, say that capital is a social relation divided into two poles that are both united and opposed. On the one hand, there is the class that disposes of the means of production, and on the other, the class that lives off its labour. In the first act of the process, the owner buys the means of production and ‘hires’ the worker by transforming the former into ‘constant capital’ and the labour-power into ‘variable capital’. Surplus-value is born from this specific union. The circuit of money capital, a private relation of value with value, this self-mediation of value through the unit of production is not only the process of growth of an individual capital, but is also the condition conferring to capital a sustainable character. Not only the ‘father’ gives birth to the ‘son’, but the son becomes the father so that the same process can be perpetuated.

Thus, capital and its contradictions already appear in a conceptually developed form. Capital is a structured and articulated totality governed by contradictions of which the most striking are those between production and circulation (consumption), and those between social classes. This totality is capable of changing and producing new and particular contents in which the same contradictions that have been momentarily weakened will reappear in a modified form. Between the universal ‘laws’ of capitalism and their particular manifestation, there is no insurmountable contradiction, but rather a necessary relation. Capital is not an empty form filled with a particular content, but is rather a subject/object animated by an internal end-purpose, a moving correspondence

41. These discussions offer themselves to various interpretations. Thus, the first process shows that thinking is perfectly capable of producing itself. The idea is presented as a subject/object, an ‘inwardness’ and an ‘exteriority’ (these two terms used in another context are popularised by Marx: base, or infra-structure, and super-structure), which co-operate and communicate so that the whole reproduces itself. The second process shows that the extra-conceptual (the object that is external to thought), which is nothing in itself, is internalised by thinking in the form of a gap, or one could say in the form of an intellectual curiosity. In this way, the Idea is in movement and ‘open’ to the outside thanks to itself. Finally, the third process expresses the fact that the Idea is a totality that is not only open, but also complete, for its internal contradictions do not destroy it. On the contrary, they are constantly momentarily overcome and eternally present, so that the Idea is a process without end that destroys the stages of its passage without destroying itself.

of the Notion and reality, which is at the same time a relation of constant tension between these two poles, sometimes accentuated (structural crises) and sometimes attenuated.

The dialectic is a tarnished term and we no longer know for sure what it is. According to Hegel, 'it is the Idea itself which is the dialectic'.⁴² It is the living, rigorous and contradictory 'logos', and not a violent and artificial reproduction of reality. It has a considerable advantage in relation to other known methods. It is 'evolutionist', and precisely because of this the dialectic is anticipatory. Marx did not 'turn' Hegel 'upside down'. Marx considers, in the last period of his life, that he only liberated Hegel from his mystical or theological 'ambiguities'. He did more than that, for even pure logic cannot be indifferent to its possible applications.

12.6 Remarks

Denis is the first to have drawn our attention to the relation between the syllogisms of life and capital. Our analysis owes a lot to his work. The reader of *Hegelian Logic and Economic Systems*⁴³ will have observed, however, that we have a different way of establishing the relations between the process of life and the process of capital.

Determining the forms of the syllogisms in Hegel that correspond to the three processes examined above is not an easy task. Hegel himself does not explicitly discuss the syllogistic form that corresponds to each process, except in an addition to §342 of the *Encyclopaedia*. However, this addition is too cursory and debatable.

This difficulty of formally determining the syllogisms of the Hegelian processes lies at the origin of an error in Denis's analysis of the cycles of capital, in the book mentioned above. By basing himself especially on this addition (§342), Denis identifies the 'Genus-process' with the cycle of productive capital, and the process of 'Shape' with that of monetary capital. The error consists in this: instead of taking as his starting-point the 'functional' determination of each process both in Hegel and in Marx, he takes as his starting-point what he deems the formal determination of the Hegelian processes in order to interpret the cycles of capital later on. We do not see for what reason the processes/syllogisms in Marx and Hegel should necessarily correspond formally. Whichever might be the form of the process/syllogism of the 'Shape' in Hegel, for example, the philosopher shows

42. Hegel 1991b, p. 289; Hegel 1970e, p. 371.

43. Denis 1984.

the capacity of the organism to maintain itself by a movement of reconstitution of its internal organs. This happens exactly as in the cycle of productive capital.

In his book *Hegel: Political Thinker*, the same author considers that he was mistaken in his previous book concerning the issue of the formal organisation of the organism in Hegel. In that book, Denis presented the syllogism of the 'Shape' as a syllogism of a 'reflexive kind', or the U-S-P kind. He corrects this error in the later book: 'In reality, it seems to us that today one cannot doubt that the syllogism of the Shape, in Hegel, is an "immediate" syllogism of the E B A [S P U in German initials] or the S P U kind'.⁴⁴

However, one cannot be mistaken about one of the syllogisms without being mistaken about at least another one, because the syllogisms constitute a system (the same term cannot appear twice as a middle-term). Indeed, Denis explicitly criticises one of the three syllogisms, but he also modifies the other two. Thus, in his last book, he considers that the syllogism of the 'Shape' is a syllogism of the S-P-U kind, that of the 'Assimilation' is a syllogism of the U-S-P kind, and, finally, that of the 'Genus' is a syllogism of the P-U-S kind. Thus, the formal organisation he proposes in this book is different from the one he proposed in his previous book.

In his last book,⁴⁵ *Hegel: Political Thinker*, Denis devotes only a few paragraphs to the circuits in Marx and the syllogisms of the living being in Hegel. In any case, the functional correspondence between the processes of the organic being in Hegel and the cycles of capital is established in this book in the same way as in the present work. However, this does not mean that Denis now emphasises the functions of the syllogisms over and above their forms. He identifies the process of production with the universal, and money with the singular. Thus, the syllogisms in Hegel and in Marx are seen as corresponding functionally as well as formally (in any case concerning the middle-term – but the latter is most important and not the place of the extremes); this, however, comes at the price of a paradoxical admission: money is not seen as being the concrete universal of the syllogism, but is rather its singular.

We do not see how this can be accepted.⁴⁶ The universal is the 'simple relation to itself, the soul, which is everywhere present'.⁴⁷ Capital's simple relation to itself can only be its value represented by money. Whichever might be the

44. Denis 1989, p. 214.

45. Denis 1989, pp. 201–3, 214.

46. Denis believes that the labour theory of value is entirely wrong and irreconcilable with the organic theory of capital, such as Marx presents it with Hegel as his starting-point. In this way, Marx's economics is the contradiction from beginning to end: either value is labour, or capital is life. We have attempted, throughout this book, to show the opposite, namely, that Marx's theory of value can be defended as well as his organic theory of capital; that the 'two' theories, far from being irreconcilable, constitute a single unit that contributes a lot to the understanding of our societies.

47. Hegel 1991b, p. 292; Hegel 1970e, p. 375.

form of capital, commercial, productive, monetary, its relation to itself is established through money: when capital is manifested in a productive or commercial form, money appears in the accounts, thus establishing the unity between the various parts of capital. Thus, at each moment, capital is expressed by a certain monetary value. Indeed, it is trivial to note that capital as a simple unit is not x machines and y raw materials and z commodities, and so on, but is instead, quite simply, value and, therefore, money. In this way, does Denis not eliminate an error by committing another one?

What is important for Hegel is the systematic coherence founded on logical and valid ideas. It is a coherence that one finds in the three processes of capital in Marx, whatever the 'formal' differences of the syllogisms that 'sum up' and 'codify' the ideas of both authors.

Section Two

The Turnover Times of Capital

Chapter Thirteen

Value, Real Wealth and Circulation Time

The fifth and sixth chapters of Part I of Volume II of *Capital* are entitled 'Circulation Time' and 'The Costs of Circulation'.¹ Circulation time constitutes, however, a part of the turnover time of capital, and it can be surprising to see it in the first part and not in the second, given that the latter is actually entitled 'The Turnover of Capital'.

We believe, however, that one can understand why this chapter appears in the first part. Essentially, the chapter provides details concerning the relation between value and the transformations of capital. This relation is analysed in more detail subsequently in the chapter devoted to 'the fees of circulation'. However, these details presuppose a definition of circulation and production time. This is why we prefer to examine them within the framework of the turnover of capital.

For the time being, and for the convenience of the discussion, we assume that capital is transformed abruptly, and that commodities are sold at their values.

The circulation time of capital includes two stages of which it is the addition: the stage of the purchase of commodities intended for the productive process, and the stage of the sale of the produced commodities.

Capital also spends time in the sphere of production. Marx calls this time 'production time'. It is generally greater than the working time, for it also includes the intervals during which the working time is interrupted,

1. Marx 1978.

as well as the stages during which the means of production appear, in the sphere of production, as available means, before they enter into productive consumption. Production time is, therefore, the time period during which the means of production function as such in an active, inactive (during the interruptions of the productive process), and a potential (as stocks) manner. Production time defined in this way is the lifetime of the means of production.

Moreover, certain use-values, because of their natural specificities (wine, for example), need to spend a greater amount of time in the productive process and the sphere of production than the working time devoted to their production, even if one assumes a working time of 24 hours per day. The necessary time for the production of a given commodity is its production time. We see, therefore, that the notion of production time does not merely refer to the lifetime of the means of production. Rather, it is a notion that is as necessary for determining the turnover time of productive capital as it is for determining the turnover time of the product. We will revisit this in Chapter Fifteen.

Marx specifies that the means of production transmit to the products their exchange-value not only during the working time, but also during the production time more generally. This is because the means of production also lose their use-value during the interruptions of the productive process. One assumes, of course, that this loss of use-value is not greater than what is socially normal. During the interruptions of the working time, productive capital transmits its value to the product without adding any new value to it. In the best of cases, therefore, this is a zero-sum game, whereas 'inactive' productive capital constitutes for the capitalist a useless advance of value. The immanent tendency of capital to prolong the working day, and to completely eliminate, if possible, the interruptions of the labour process, stems from this concern. It is clear that the more night and holiday shifts become generalised, the more the extension of the working time beyond the natural limits of the working day appears as an external and coercive necessity to every individual capital.

The turnover time of capital is the sum of the production time and the circulation time. The lengthier the production time, for a given turnover time, the shorter the circulation time, and vice versa. Therefore, circulation time constitutes a 'loss of time' for capital. This is because the value of capital changes form without being valorised during this time.

The assumption according to which the forms of capital appear as an abrupt temporal successivity simplifies our discussion without falsifying its results. We could momentarily proceed without making this assumption. The simultaneous unfolding of the three circuits of capital entails the division of value into value engaged in the sphere of production, and value engaged in the sphere of circulation. For a given quantity of value, the greater the value set aside for the

sphere of production, the smaller the value set aside for circulation, and vice versa. The latter is a function of circulation time. The greater this time is, the greater the value engaged in circulation will be. What we previously characterised as a 'loss of time' now appears as a 'loss of value' productively invested. What one saves in time, one loses in mass. This can be expressed in very simple mathematical terms.

It is enough for the moment to assume that turnover time (T_{turn}) lasts for one year, so that production time and circulation time are less than or equal to 1. The maximum value that can be productively invested (V_{prod}), as a function of circulation time (ct), is written: $V_{prod}(ct) = Va - (Va \cdot ct)$. Va symbolises the total value of capital advanced. If $ct = 0$ (first extreme case), then the total value of capital can be productively invested. If $ct = 1$ (second extreme case, which is that of a purely commercial capital), then $V_{prod}(ct) = 0$. Obviously, the value productively invested can be expressed as a function of production time, pt . In that case, we get the following function: $V_{prod}(pt) = Va \cdot pt$. If $pt = 1$ (one year), then $V_{prod}(pt) = Va$. If $pt = 0$, then $V_{prod}(pt) = 0$. There is, of course, no reason for turnover time to be equal to 1. However, the above functions have the advantage of presenting the relations of mutual dependence between the fractions of value and the fractions of turnover time in their pure state. The same functions for every turnover time can be presented as follows: $V_{prod}(ct) = Va - (va \cdot ct/T_{turn})$ and $V_{prod}(pt) = Va \cdot pt/T_{turn}$.

Marx makes use of these simple observations to explain certain phenomena of consciousness and representation. Marx says that the negative effect the time of circulation has on the valorisation of value is understood neither by the economic agents nor by the economists, for this effect appears to be positive: 'But what political economy sees is only the appearance, i.e. the effect of the circulation time on the valorisation process of capital in general. It conceives this negative effect as positive, because its results are positive'.²

The fact that *Capital* is a 'critique' appears throughout the work, including when Marx deals with questions of a highly technical nature, such as 'circulation time' and 'production time'. But why are the consequences of circulation time positive? Marx mentions several reasons, such as, for example, the mode of price-formation, a subject dealt with in the third volume. Let us simply note for the time being that circulation time appears in the calculation of profit as a positive factor, since 'with capitals in different spheres of investment, in which only the circulation times differ, longer circulation time is the basis for a higher price'.³

On the other hand, certain economic activities have a positive impact on the valorisation of value, although this impact might seem to be negative. This is

2. Marx 1978, p. 204.

3. Ibid.

the case – just to provide the most characteristic example – of the transport industry, which, in Marx, is a productive activity, and one that produces value and surplus-value. The potential confusion stems from the fact that, on the one hand, transport does not produce material use-values, while, on the other, its impact on the transported use-values is zero or negative.

The couple ‘production time/circulation time’ is related to the couple ‘productive labour/unproductive labour’. First of all, the notion of unproductive labour seems to be connected to the production of wealth in general, and as a result it can appear to be transhistorical. In the capitalist mode of production, however, this notion carries specific determinations, as we will see later. Speaking of the book-keeping practices of the archaic communities of India, Marx writes:

Here book-keeping gained an independent position as the exclusive function of a communal official. This division of labour saves time, energy and expense, but production and book-keeping of production remain as separate as the cargo of a ship and the bill of lading. In the person of the book-keeper, a portion of the communal labour-power is withdrawn from production, and the costs of its function are replaced, not by its own labour, but by a deduction from the common product.⁴

The labour of the book-keeper is, therefore, unproductive – despite it being socially necessary – since it does not contribute to the creation of real wealth. The lengthier the time of unproductive labour and the more such activities are necessary, the shorter is the time devoted to production.

The difficulty of distinguishing between unproductive and productive labour time has to do, first of all, with the determination of real wealth. In Marx, real wealth is an object likely to satisfy human needs of any kind. It is the addition of the productively or individually consumable objects. Contrary to use-value, it is not necessarily a material object. The communication industry, whatever the social form, produces immaterial ‘use values’, or – to follow Marx’s terminology – ‘useful effects’. The transport industry produces transport without there being anything material in it:

But what the transport industry sells is the actual change of place itself. The useful effect produced is inseparably connected with the transport process, i.e. the production process specific to the transport industry. People and commodities travel together with the means of transport, and this journeying, the spatial movement of the means of transport, is precisely the production process accomplished by the transport industry. The useful effect can only be consumed during the production process; . . . However, the exchange-value of

4. Marx 1978, pp. 211–12, n. 3.

this useful effect is still determined, like that of any other commodity, by the value of the elements of production used up in it (labour-power and means of production), plus the surplus-value created by the surplus labour of the workers occupied in the transport industry.⁵

Here, therefore, we have production in the strict sense of the term, that is, the creation of a 'use value', even if an immaterial one. From an anthropological perspective, this observation is enough to characterise any transport activity as 'productive'. From this point of view, not only transport, but, more generally, any activity related to the transmission of image, sound, information, knowledge, and so forth, belongs to the category of productive labour, although not in the production of material objects. For example, education as the transmission of knowledge is productive, even if it does not involve a single atom of matter. Let us note in passing that Marx partly mentions the above 'services'. He specifies that with the term 'transport' he also means 'the transmission of mere information – letters, telegrams, etc.'⁶

Education, in its pure form, transmits knowledge, but it does not produce knowledge, in the same way that the transport industry produces transport, but not space. The production of knowledge, image, sound, information, and so on, cannot be reduced, therefore, to the issue of their transmission. As far as information is concerned, things are relatively simple. It is clear that the production of a political event is not production in the economic sense of the word. More generally, it is obvious that 'social conflict', 'short news items', and such like, are completely different things from the process of wealth production. However, it seems that the production of knowledge, image, artworks (including, of course, musical composition), literature, and so on, constitutes productive labour, although these are not necessarily commodities (since they are not always reproducible). Thus, we arrive at the problems raised by this anthropological line of reasoning. For whom is musical composition, literature, or the production of knowledge, productive? They are certainly productive for humanity, but not necessarily for capital. What is productive for a society inhabited by capitals is solely what directly satisfies the 'needs' of the value cycle. This is why Marx writes the following:

Since the immediate purpose and the *authentic product* of capitalist production is *surplus value*, *labour is only productive*, and an exponent of labour-power is only a *productive worker*, if it or he creates *surplus value* directly, i.e. the only productive labour is that which is directly *consumed* in the course of production for the valorization of capital.⁷

5. Marx 1978, p. 135.

6. Marx 1978, p. 134.

7. Marx 1976a, p. 1038.

This is why, when speaking of capitalist transport activity, Marx specifies that the latter produces value and surplus-value, in addition to the useful effect.

As Nadel rightly remarks, 'it is possible that two "concrete" labours, with apparently identical contents, are not both productive labours from the point of view of capital. The "simplest" example is that of the schoolmaster who, when waged by a capitalist for a private lesson, is productive but is not so if he works as a tax collector paid out of the income of the same capitalist. The same goes for any immaterial activity (service)'.⁸

A significant part of this kind of activity is, therefore, in the capitalist mode of production, not productive. This is because these activities do not produce surplus-value. There exists, however, a commercial 'literary' production, which produces value and surplus-value, and whose economic weight is important. Ernest Mandel proves this in a book⁹ about bad-quality crime novels in which everything happens according to predictable patterns, in the same way as commodities of the textile industry are constantly reproduced with a change in fashion from time to time. Similarly, in the fields of transmission and production of image and sound, where production is governed by the profit motive, the workers of these sectors perform a productive activity.

If the materiality of wealth is not the principle that distinguishes between productive and unproductive labour, which labours exactly constitute unproductive labour for capital? Which labours do not directly produce surplus-value? To answer this question it is enough to ask which labour produces use-values/useful effects without directly participating in the production of surplus-value. The labour invested in the temporality of circulation does not produce surplus-value, although it can indirectly contribute to its production. Like the book-keeper's labour, the labours invested in banking, stock-exchange, advertising, commercial and insurance activities are typical examples of unproductive labour. All these activities accompany the production of wealth and surplus-value without contributing to their creation.

The task of insurance activity is to distribute the losses, not to replace them. It distributes the 'claims' on social labour or use-values/useful effects without participating in their creation. Whatever their social necessity, they do not contribute to the creation of productively or individually consumable objects, or to the production of surplus-value. The task of advertising is the reduction of circulation time, and the increase of production time resulting from the former. Quite often, the reduction of the circulation time of an individual capital

8. Nadel 1983, p. 179.

9. Mandel 1985.

comes together with the extension of the same time of another capital. What is a positive effect for one is a negative effect for the other. Not only does advertising not contribute to the creation of surplus-value and wealth, but it also constitutes for social capital a pure loss of time without any useful social effect.

It is useless to examine stock-exchange activity. It is obvious that it does not contribute in any way to the creation of surplus-value.

Both banking and insurance companies redistribute and protect the 'claims' on social labour without contributing to the multiplication of bourgeois wealth. Banks also produce certain material objects with the aim of facilitating economic circulation (credit cards, chequebooks, the central bank producing monetary notes – in short the symbols of value). These objects are intended for the consumption that takes place in circulation, but not for productive consumption. The public treasury produces metallic coins, but the labour devoted to their production is unproductive.

We have often spoken of a 'purely commercial capital'. It is time to clarify the meaning of the word 'purely'. Certain activities carried out by what is called 'commercial capital' actually represent productive activities hidden in a circulatory form. Such is the case, for example, in any labour whose aim is to maintain commodities in circulation. This labour can be considered a 'transport' activity producing the temporal 'transfer' of use-values and exchange-values. Variable and constant capital (buildings, warehouses, storage tanks, refrigerators, heating, and so forth) are necessary for this activity. Conservation labour is, therefore, productive, provided it stems from the necessity of conservation itself and not solely from the need of the shopowner to convert his commodities into money. When stocking becomes 'abnormal', namely, when it exceeds what is required by society (the society of capitals) in order to find the commodities it needs in sufficient quantities on the market, then the conservation of commodities becomes a purely 'formal' activity. Purely commercial capital is, therefore, the capital whose sole aim is the change in form, the conversion of money into commodities, and vice versa. The fact that the conservation of commodities and their sale are, for all practical purposes, often two spatially and temporally inseparable activities, does not eliminate the heterogeneity of their economic nature.

What Marx calls 'false costs of production' are the costs resulting from the consumption of labour-power and constant capital in the framework of an unproductive activity or, if one prefers, in the temporality of economic circulation. Since the criterion for distinguishing between productive and unproductive labour is based on the notion of social surplus-value, this distinction is neither transhistorical nor universal despite the fact that some of Marx's discussions have a more general scope.

In a communal economy, there is no commercial circulation, or in any case its economic weight is weak. However, there is circulation of use-values/useful effects from communal production that must enter into individual consumption. The distinction between productive and unproductive labour remains valid insofar as the distinction between the production time and the circulation time of wealth is not a specific characteristic of the capitalist mode of production. The real economic wealth of a society, whatever its form, is a function of the objects (both material and immaterial) that it produces and consumes, productively and individually, not of the objects produced and consumed in and for economic circulation.

The notion of unproductive or indirectly productive labour has nothing to do with its social necessity. Accounting, insurance companies and banks, advertising and commercial activities, and so on, are necessary for capitalist production and at the same time unproductive. Are not all these activities, which do not produce any useful effect or 'surplus-value' (bankers' profits and the like), in the last analysis, of the same kind as those industrial activities that produce immaterial use-values? Of course, they produce a useful effect, while they distinguish themselves from those activities that contribute to the creation of wealth in the strict sense of the term and to the production of surplus-value. The more labour-time is necessary for such activities, the less of it remains available for the satisfaction of social needs, including when such 'social needs' are those of capitals in their fundamental form. The useful effect of these activities is to be found in a reverse relation concerning the satisfaction of social needs, whereas the production of commodities/use-values/useful effects, on the contrary, is in a direct relation with the latter. The useful effect of advertising and commercial activities, for example, is the reduction of the time spent selling commodities. This reduction is a necessary condition for the extension of the production time, and, thus, for the growth of the mass of surplus-value. But it is insufficient. What one saves in selling time, one can hoard, or even unproductively consume. The wealth of society would not increase by a single penny. What one saves in selling time is not directly at the origin of the valorisation of value. The reduction of circulation time (of the quantity of value in circulation) can occur without an increase in the value productively invested, when the quantity of value corresponding to the saved circulation time is individually consumed. In other words, wealth in general and surplus-value in particular increase not because circulation time is reduced, but because production time increases.

Since unproductive labour in general does not produce real wealth – exchange-value being, in the capitalist framework, what remains once this wealth has been negated – it can produce neither value nor surplus-value: 'They [the commodities] must change their old use form within a certain time, and continue their

existence in a new one. It is only through this constant renewal of its body that the exchange-value maintains itself'.¹⁰ 'The general law is that *all circulation costs that arise simply from a change in form of the commodity cannot add any value to it*'.¹¹

When past labour (material – 'constant capital') and current labour ('variable labour') enter into the temporality of circulation, they do not add value to commodities, since they do not contribute to the creation of wealth in general and even less so to the creation of bourgeois wealth.

When examining simple circulation, in the first part of this study, we observed that the circuit M-C-M' of a commercial capital contradicts the laws of simple circulation. The acts M-C and C-M, taken separately, are part of the framework of simple circulation, and the difference in value between M' and M remains unexplained. With the introduction of the notion of unproductive labour, this difficulty can be overcome.

The shopowner sells the purchased commodities at their values, but he purchases them for a price below these values. This can appear contradictory with what we previously wrote in Chapter Six: 'Let us now admit that the buyer has the privilege of purchasing the same commodity at a price below its value. It is obvious that what he would save as buyer, he would lose as seller'.

Indeed, he would lose it as seller if the buyer enjoyed generally the same privilege. But the shopowner is not a buyer like any other. He takes advantage of a part of the surplus-value produced by industrial capital, in exchange for the unproductive service that he provides to the latter (namely, the reduction of its circulation time). This is where the particular privileges of the shopowner as buyer come from. Industrial capital – which, in Marx, let us remind the reader, is not productive capital, but capital in its fundamental form, that is to say, the unity of its three circuits – sells and purchases commodities at their value. This does not prevent commercial capital – a derived form of industrial capital and personification of one of its functions – to participate in the consumption of surplus-value without contributing to its production. The three forms of capital appear to be autonomous, but none of these forms is sufficient and intelligible on its own.

In conclusion, we would say, therefore, that the distinction between productive and unproductive labour is founded not on external criteria – such as the form of use-value or the materiality of the product, the objective social necessity of the commodity, and so forth – but rather on criteria that are immanent to the capitalist organisation of time. Certain economic activities, whatever their

10. Marx 1978, p. 206.

11. Marx 1978, pp. 225–6.

social necessity, represent for capitalist society a 'loss of time' because they do not contribute to the social process of the valorisation of value.

A democratically planned economy would not be able to make every form of labour productive, but it would enlarge the field of activity of productive labour by liberating it from specifically capitalist criteria.

Chapter Fourteen

Turnover Time and Fixed and Circulating Capital

As we have already noted, the turnover time of a given capital is the addition of its production and circulation times. The concept of turnover implies, moreover, the repetition of the circuit: 'The circuit of capital, when this is taken not as an isolated act but as a periodic process, is called its turnover'.¹

Turnover time is, therefore, the period during which capital fulfils its various functions in order to end up in the same function as in the beginning. If we assume that the turnover time is known, it is easy to calculate the number of turnovers of the same capital for a temporal unit of measure. If T_{turn} represents the turnover time, n the number of turnovers, and R the unit of measure – a year, for example – we obtain the following relation: $n = R/T_{turn}$.

If the selling time of the commodity and the purchasing time of the means of production do not seem to present any particular theoretical difficulties (we will see in Chapter Fifteen that purchasing time is a rather complex notion), the same does not hold for the production time of capital. How can production time be calculated? The organs of productive capital – constant and variable capital (which are part of a linear temporality) – are two notions that are not very useful for answering this question.

The turnover mode, inside constant capital, is not homogeneous or qualitatively identical. This non-homogeneity stems from the mode of transmission of

1. Marx 1978, p. 235.

the value of the elements of productive capital to the commodities. The value of certain elements of productive capital is only partly transmitted to the produced commodity. A part of the value of the machines, the buildings, and so forth, is progressively transferred (with the wear and tear of their use-values) to the product, and circulates as value in the produced commodity. Another part of the same value remains, at the same time, fixed in the use-value of these same elements of production. These elements will continue to participate in the production of new commodities. Fixed capital is characterised by this specific turnover mode and necessarily participates in several production periods of any commodity.

As we have seen in the previous chapter, the production time of the commodity begins with the production process and ends when the intended effect of this process is obtained, namely, at the moment when the product leaves the process in the form of a commodity. If the production of an airplane necessitates a four-month period spent in the sphere of production, its production period is four months. The production periods of various commodities are very different. These periods are measured for certain commodities in years, for others in months, for others still in days or even hours. Bread, for example, belongs to this last category. The production period of this commodity is not, as a matter of course, the production period of one unit of bread, but rather that of one productive unit: one always produces a certain quantity of a particular kind of commodity. This quantity is required by the technical material invested in the production process.

The degree of fixity of a productive element depends on its longevity, that is to say, on the speed of its productive consumption, but the length of its life as such is not the distinguishing criterion between what Marx calls 'fixed capital' and 'circulating capital'. Only the turnover mode determines the nature of capital.

Circulating capital is the capital whose entire value moves on to the produced commodity and circulates with it. Most raw and ancillary materials, as well as variable capital, belong to this category. The value of fixed capital leads a dual existence, so to speak. One part of it remains in the sphere of production, attached to the use-value, which in this sphere plays the role of means of production, whereas another part of the same value is passed on to the commodity and money, and circulates with them. Circulating capital behaves differently. The totality of its value remains attached to the productive process for as long as the product is in the process of being produced, and then circulates with the produced commodity and the money that it returns.

In general, raw and ancillary materials are placed in the category of circulating capital. This is not entirely wrong, for almost always the turnover mode of raw materials is that of circulating capital. However, it must be noted that

things as such are neither fixed nor circulating capital. Their natural quality has nothing to do with their economic determination. A raw material can, theoretically and practically, function as fixed capital if its turnover mode is that of fixed capital. Certain raw materials used in agriculture (soil or fruit-tree treatment, for example), and which are sufficient for several harvests, are fixed capital. Their use-value progressively deteriorates. A part of their value circulates with commodities and another remains imprisoned in the sphere of production.

Marx is the first economist to have introduced a valid distinction, which conforms to the nature of capital, between fixed and circulating capital. He says that the economists treat certain material properties of the means of production – such as their material immobility, for example – as immediate properties of fixed capital, ‘as if things, which are never capital at all in themselves, could already *in themselves* and by nature be capital in a definite form, fixed or circulating’.² Only the mode of mobility of value, its mode of economic circulation, determines the nature of capital.

In many productive activities, certain elements of circulating capital are fixed in the sphere of production in sufficient quantities for more than one period, or for several periods, of production. But this surplus or stocked circulating capital does not circulate as either value or use-value together with the produced commodity, since it does not constitute an active element of the period of production in question. The use-value of active circulating capital, during a period of production, is entirely consumed, so that the use-value of the commodity can be produced. It is always ‘another’ circulating capital that actively participates in each period of production – as much from the point of view of its use-value as from that of its value – whereas the same machine, for example, actively participates in several periods of production. In other words, the turnover time of fixed capital necessarily includes several turnovers of circulating capital.

Therefore, we see that the categories of fixed and circulating capital are part of a cyclical temporality. These two notions exclusively belong to the sphere of production of capital – for only productive capital can be fixed or circulating – but they are categories of productive capital insofar as productive capital is a moment of the total circulation of capital or its turnover. Marx no longer examines circulation *stricto sensu* independently of production, or the latter independently of the former, but instead considers both as distinct and united moments of the cycle of capital. The categories of fixed and circulating capital relating to the mode of circulation of value must be added to the categories of constant and variable capital, which only concern the mode of valorisation of value. Both sets

2. Marx 1978, p. 241.

of categories exclusively concern productive capital and are part of two different temporalities.

The turnover times of the fixed and the circulating or fluid element of capital represent different durations. But the various elements of fixed capital also have different turnover times. Certain machines wear out faster than others, and buildings in general deteriorate more slowly than machines. To know the turnover time of the capital advanced, that is, the interval necessary for the monetary capital initially invested in productive capital to return to its original form (enriched with a surplus-value), one must calculate the average duration of the turnovers. This is very simple. The value of the various elements of fixed capital and the value of the circulating capital annually consumed must be calculated first. To calculate this value it is enough to multiply the annual number of turnovers (R/T_{turn}) of each element ($1, 2, \dots n$) of capital by its initial value (V), and add up the various values obtained in this way:

$$(V_1 \cdot R/T_{turn1}) + (V_2 \cdot R/T_{turn2}) + \dots (V_n \cdot R/T_{turnn}) = V_c \text{ (the value annually consumed).}$$

The average (weighted) turnover time of the advanced capital (T_{turn}) can now be calculated. It is equal to the value advanced (V_a) divided by the value annually consumed (V_c):

$$T_{turn} = \frac{V_a}{V_c} = \frac{V_a}{V_c (V_1 \cdot R/T_{turn1}) + (V_2 \cdot R/T_{turn2}) + \dots (V_n \cdot R/T_{turnn})} \quad (R = 1)$$

Marx never presented this formula himself. However, the formula is simply the 'translation' of an arithmetical example he presents in chapter nine of the second volume of *Capital* entitled 'The overall turnover of the capital advanced. Turnover cycles'.³ The turnover of capital presents, however, certain additional problems, which we will examine in the following chapter (see section 15.2).

Capital buys labour-power, not the value of variable capital after it has functioned. The quantity of surplus-value produced during the average turnover time of capital does not influence the way in which this time is calculated. At the end of this turnover time, not only does monetary capital return to its initial form, but it returns to it enriched with a quantity of additional value corresponding to surplus-value. Everything happens as in the circuit of monetary capital – $M \dots \text{etc.} \dots M'$ – except that now the interval between M and M' is specified as the average turnover time of fixed and circulating capital, that is, as the average duration of the turnovers of the various elements of the initial value productively invested.

3. Marx 1978, p. 265.

With the introduction of the concept of turnover, there is nothing easier than to calculate the annual or diachronic rate of surplus-value. It is enough to know the turnover time of circulating capital (T_{turn}), as well as the variables of the synchronic rate of exploitation s/v . The diachronic rate of surplus-value is given by the following formula: $s/(T_{turn} \cdot v)$. If, for example, in order to produce 100 francs of surplus-value every day, 100 francs of variable capital need to be consumed, then the synchronic rate of exploitation is 100 percent. If the turnover time of circulating capital is six months, the annual rate of surplus-value is $s/(T_{turn} \cdot v) = 100/(100 \cdot 0,5)$, or 200 percent.

The diachronic rate of valorisation of capital can now be rigorously calculated. We know the formula for the synchronic rate of valorisation (pr). If one knows the respective values of the surplus-value produced, of the constant (c) and variable capital (v) consumed during a given period (R), one can calculate the synchronic rate of valorisation: $pr = s/(c + v)$. To calculate the diachronic or annual rate of valorisation, it is enough to know the average turnover time of capital (T_{turn}). This is possible thanks to the notions of fixed and circulating capital that designate the turnover modes of value. Since $T_{turn} = Va/Vc$ or $Va = T_{turn} \cdot Vc$, it follows that if one divides the surplus-value produced during the year (S) by the capital productively consumed ($c + v$) during the year and multiplied by its average turnover time (T_{turn}), one obtains the annual rate of valorisation:

$$Pr = \frac{S}{Va} = \frac{S}{T_{turn}(c + v)} \text{ or } Pr = \frac{s/v}{T_{turn}(c/v + 1)}$$

Since the relation S/v designates the surplus-value produced during the year in relation to the variable capital consumed during this same period, we are dealing with the rate of synchronic exploitation. We could, therefore, also write the formula as follows:

$$Pr = \frac{s/v}{T_{turn}(c/v + 1)}$$

Moreover, since the surplus-value annually produced in relation to the constant and variable capital annually consumed constitutes the synchronic rate of valorisation (pr), we could also write the formula in the following way:

$$Pr = pr \cdot 1/T_{turn} \text{ or } Pr = pr/T_{turn}$$

We see, therefore, that constant and variable capital, fixed and circulating capital, are not linked by superficial relations of complementarity: we are not dealing with two pairs of notions that are juxtaposed, but with two pairs united by organic links.

The notion of the average turnover time is very important, for this time is one of the crucial factors in the determination of the rate of profit. However, it

must be noted that the real turnover time of fixed capital, especially, is also of considerable economic importance.

The turnover time of fixed capital includes n turnover periods of circulating capital. Although within each turnover period the quantity of monetary capital fluctuates, it increases from period to period. The value of fixed capital is progressively transformed, with the sale of commodities, from its productive form to its monetary one. Towards the end of the turnover time of fixed capital, monetary capital must exist in sufficient quantities in order to replace fixed capital. It follows, therefore, that during the turnover time of fixed capital, capital throws into the market a value greater than the one it withdraws from the same market. The difference between the former and the latter is used for the creation of what Marx calls the 'reserve fund' intended for the replacement of fixed capital. Only at the end of the life of fixed capital does capital require from the market that it return, in fixed means of production, the equivalent of its 'reserve fund' it has accumulated in this way.

Circulating capital must be replaced *in natura* at shorter intervals than fixed capital. The physical replacement of an important fraction of social fixed capital, which leads to considerable expenditures concentrated in time, constitutes an essential explanatory element of economic rhythms. In other words, it is at the origin of the economic cycle:

We can assume that, for the most important branches of large-scale industry, this life cycle is now on average a ten-year one. The precise figure is not important here. The result is that the cycle of related turnovers, extending over a number of years, within which the capital is confined by its fixed component, is one of the material foundations for the periodic cycle in which business passes through successive periods of stagnation, moderate activity, over-excitement and crisis. The periods for which capital is invested certainly differ greatly, and do not coincide in time. But a crisis is always the starting-point of a large volume of new investment. It is also, therefore, if we consider the society as a whole, more or less, a new material basis for the next turnover cycle.⁴

Indeed, capitalist accumulation has not ceased to appear as an alternation of the stages of acceleration and deceleration of economic activity. What has changed in the course of time, and with the various 'modes of regulation', is the turnover time of the fixed element, not the role of this time in relation to the rising or falling stages of the cycle. We will return to this issue in the chapter dealing with 'periodical crises' (Chapter Twenty-Three).

The turnover time of fixed capital does not refer to a purely technical element, but rather to what Marx calls the 'moral wear and tear of fixed capital'. This

4. Marx 1978, p. 264.

'moral' wear and tear is related to profitability criteria. These criteria are at the origin of the replacement of the fixed element of capital, reducing in this way its effective life.

* * *

Remarks: The time and birth of neo-classical economics

We see, therefore, as explicitly admitted by Marx, that the time factor intervenes in the determination of value. This factor does not naturally destroy the Marxian theory of value. The longer the circulation time of capital, the less value can be productively invested. The circulation time acts negatively, as a limit to the rhythm at which value multiplies. Turnover time is inversely proportional to the rhythm of valorisation of capital. If, for example, the same capital (all the constitutive parts remaining the same) carries out, during a given period, two turnovers instead of a single one previously, its rhythm of valorisation will double.

This influence of time on the rhythms of valorisation, or rather the confusion that can result from it, is related to certain attempts to criticise the classical theory of value and to propose an alternative theory.

Thus, the British economist William Stanley Jevons, one of the founders of neo-classical economics, in his 1871 work *The Theory of Political Economy*, considers that labour cannot be the source of value. This is because between the expenditure of labour and the sale of the product, a more or less long interval of time intervenes:

The fact is, that *labour once spent has no influence on the future value of any article*: it is gone and lost for ever. In commerce by-gones are for ever by-gones; and we are always starting clear at each moment, judging the values of things with a view to future utility. Industry is essentially prospective, not retrospective; and seldom does the result of any undertaking exactly coincide with the first intentions of its promoters.⁵

According to Jevons, there is no point, therefore, in looking for a different foundation underpinning prices to that recognised by business. Jevons considers that his arguments are sufficient for refuting the principal laws of classical economics, and he turns towards the formulation of a new theory of value based on the notion of marginal utility. He writes that '*value depends solely on the final degree of utility*'.⁶ He defines what will later on be called the 'law of the proportionality of marginal utilities to the prices of products': $Ua/Ub = Pa/Pb$. According to

5. Jevons 1970, p. 186.

6. Jevons 1970, p. 187.

Jevons, the cost of production determines supply, supply determines the marginal utility, and the marginal utility determines value.⁷ This claim has not been and cannot be proven, because not only the cost of production, but also social needs determine 'supply' – the physical quantity of any given kind of commodities supplied. A modification in the distribution of the national income can lead to a modification of the supplied quantity of certain commodities, just as an increase in or reduction to their cost of production can also alter supply.

Jevons develops another interesting idea, although a very confused one, concerning the role that time plays in economics. Capital, for Jevons, is constituted by the sum of those means used in order to produce a useful object. The use of capital is the production of a good through the use of 'roundabout' means. So, for example, he says that in agriculture it is advantageous to use certain devices instead of working with 'our fingers'.⁸ Jevons remarks that the production of 'roundabout' means is time-consuming. During this time, capital is invested. When we have to produce a plough 'which will last for twenty years, we invest at the beginning a great deal of labour which is only gradually repaid during those twenty years, and which is therefore, on the average, invested for about ten years'.⁹ Obviously, the idea expressed here is particularly unclear. Jevons considers that if we set aside the 'frequency of exchange' and the 'division of labour',¹⁰ every use of capital consists in the fact that between the beginning of the labour process and its aim (the satisfaction of a need), a certain amount of time occurs. This amount of time depends on the use of capital.

Beyond this generality, Jevons attempts to introduce in his analysis a more precise time concerning the productive process of a firm. This time is neither the turnover time of capital nor the turnover time of the product, but something intermediary, which is difficult to specify.¹¹ So he says that a pound sterling invested during five years, and five pounds sterling invested during one year, represent two investments of equal economic value. As a result, the amount of the investment can only be rigorously defined if one takes into consideration time, and not the invested units (let us assume that these are the pounds sterling).

7. Jevons 1970, p. 187.

8. Jevons 1970, p. 227.

9. Jevons 1970, p. 228.

10. Jevons 1970, p. 229.

11. The Austrian translator of Jevons's book, Otto Weinberger, notes that in one of his notebooks Jevons explains that 'the concept of capital necessarily includes the concept of time; for capital [as valorised value] is measured by its utility, which is equal to the initial utility of labour multiplied by the time resulting from [is necessary for] the consumption of the utility of this labour'; Jevons 1923, p. xv. But these comments add little to the clarity of the presentation, because certain utilities other than 'labour' must also be taken into consideration.

But which time must be taken into consideration? The time (t) that intervenes between the first invested unit of capital and the last commodity sold.¹²

It also seems to us that Jevons attempts to introduce fixed capital into his analysis, but without success.¹³ But if we set aside fixed capital, which constitutes in Jevons's analysis the weakest point and the source of numerous problems, we can follow him in his attempt to determine the 'interest rate', that is to say, the rate of profit.

Let us assume that the company successively invests in the production of units of capital. The greater the investment, the longer the time between the first unit invested and the last commodity sold. Let us call this time t and the product that corresponds to it Ft . Thus, the longer is t , the greater will be the quantity produced. If this time t is extended by dt , the product will be $F(t + dt)$, and the additional product $F(t + dt) - Ft$. If we now divide the additional product by the total product (which is supposed to be proportional to the time of investment), we obtain, according to Jevons, the rate of profit of capital, which he calls the 'interest rate'. Jevons claims that 'the interest of capital is, in other words, *the rate of increase of the produce divided by the whole produce*', which allows him to conclude that 'the rate of interest varies inversely as the time of investment'.¹⁴ Indeed, if we divide the additional product by the total product, we see that each time we add the production of a new period dt to the previous production, the return of capital is diminishing. As a result, 'every trade will employ capital up to the point at which it just yields the current interest'.¹⁵ The businessman prefers to lend his capital to another firm over investing it productively at a lower rate of profit than the standard one.¹⁶

This conclusion is very important for Jevons because he considers that in this way he has determined the rate of profit without using the classical theory of value. He declares his disagreement with the economists (he cites Adam Smith), according to whom wage increases directly influence the rate of profit. Jevons considers that 'interest is determined by the increment of produce' to which the labourer participates, but it 'is altogether independent of the total return which he receives for this labour'.¹⁷ This is because the interest rate depends solely on the relation between the increase in output during dt , which is then divided by the total output of the period $t + dt$.¹⁸

12. Jevons 1970, p. 232.

13. Jevons speaks not of fixed capital, but of machines; Jevons 1970, p. 232.

14. Jevons 1970, p. 241.

15. Jevons 1970, p. 240.

16. Ibid.

17. Jevons 1970, p. 246.

18. Among other things, Marx would have said that the rate of profit can increase or decrease without an increase or decrease in the rate of exploitation. But this is a different chapter.

However, this argument is wrong. The marginal return of capital examined here presupposes a given level of the standard interest rate, about which the only thing we know is that it exists. If the interest rate of productive firms is not close to zero – let us remind the reader that it is Jevons who speaks of diminishing returns – this is because a standard rate of interest is assumed, below which the former does not fall. Still in need of explanation then is why this ‘standard rate’ is 5 percent or 10 percent and not 1,000 percent, and why this rate of interest varies periodically. Jevons presupposes the solution to the problem that he claims to have solved.

But there is no error that does not contain an element of truth, even if, as in this case, this element is fortuitous. Denis notes that ‘Jevons’s analysis shows, not the way in which the rate of interest (the profit rate – as Jevons believes) is determined, but the way in which the quantities of capital that firms use are determined for the existing rate of interest (we would say for the average rate of profit)’.¹⁹

From a historical perspective, Jevons’s arguments are interesting because they constitute one of the first radical critiques of classical political economy, using economic arguments. Auguste Comte wanted to eliminate political economy and replace it with sociology because, according to him, the economists’ metaphysical and scholastic debates were useless.²⁰ Comte’s ‘sociology’, like ‘positive science’ in general, claimed to be founded on the observation of immediate facts and aimed at establishing the relations between them,²¹ so as to eliminate the diverging opinions that would never converge and that would lead nowhere. Jevons, however, while refusing the logic of the foundations ‘hidden’ behind the market’s observable accidents, attempts to identify the relations between these facts in an economic-mathematical language.²² This is important because the ‘conservative’ critiques of classical economics cannot afford the luxury of ignoring strictly economic language, or the apparent neutrality of mathematical language, of which Comte the mathematician was an avowed enemy.²³

19. Denis 1980, p. 484.

20. On Comte’s relation with classical economics, see Denis 1980, pp. 457–74.

21. Comte writes that ‘in a single word, the fundamental revolution characteristic of the virility of our intelligence consists in substituting everywhere, to the inaccessible determination of causes, the simple search for laws, i.e. for the constant relations that exist between the observed phenomena. Whether we are dealing with the least or most important effects, with shock and gravity, with thought and morality, we can only really know the various mutual relations that belong to their completion, without ever penetrating into the mystery of their production’; Comte 1979, pp. 26–8.

22. He uses Euclidian geometry and certain elementary notions of differential calculus.

23. We do not know to what extent Jevons was directly or indirectly influenced by French positivism, or whether he was influenced by the thinking of other philosophical ‘systems’. The neo-classical authors were influenced by multiple philosophical traditions.

Some of Jevons's opinions will be adopted later on by Eugen von Böhm-Bawerk, an Austrian economist and finance minister to the Austrian emperor.

In his *Positive Theory of Capital*, Böhm-Bawerk claims to correct and extend Jevons's theoretical contribution. Let us attempt to specify the content of this theory: '*Present goods are as a general rule worth more than future goods of equal quality and quantity*. That sentence is the nub and kernel of the theory of interest which I have to present'.²⁴

According to Böhm-Bawerk, three reasons or factors (tautological ones given that the third factor, as we will see, should be the cause of the first one, which is not a real factor but a simple observation) are at the origin of the fact stated above:

- (1) The supply of consumption goods improves progressively, so that the equilibrium between supply and demand, at a subsequent moment, leads to a decrease in the value of commodities.
- (2) Consumers 'depreciate the future' more than the latter depreciates itself in the way pointed out above. This is either because consumers need to spend their entire income, or because they underestimate their future needs and the means for satisfying them.
- (3) Current means of production are, for 'technological reasons' (sic),²⁵ preferable to future means of production and have a greater marginal utility.²⁶ We need to revisit the notion of production through the use of roundabout means, as found in Jevons, to understand the exact meaning of this claim. Böhm-Bawerk writes the following:

It is an elementary fact of human experience that time consuming roundabout methods of production are more productive [*ergiebig*, more profitable]. That means that, given equal quantities of the means of production, the more time a method of production consumes, the greater will be the output it produces.²⁷

Léon Walras, for example, cites Kant as if he were an undisputed authority; see Denis 1980, pp. 486–500.

24. Böhm-Bawerk 1959, p. 259.

25. Böhm-Bawerk 1959, p. 273.

26. The third factor is the most important one, as Böhm-Bawerk highlights in a subsequent article; see 'Zur Verteidigung und Ergänzung der "Positive Theorie des Kapitals"', in Böhm-Bawerk 1968, pp. 53–120. Here, he defends his theory against Walker. For Böhm-Bawerk, the three reasons or factors, which are at the origin of the decrease in prices, are not 'cumulative'. The first two factors are cumulative; the third one is an alternative factor. If the cumulative effects of the first two factors produce a 25 percent price decrease, and the third one produces a 30 percent decrease, the decrease will be 30 percent. The factor that produces the greater future depreciation is determinant.

27. Böhm-Bawerk 1959, p. 273.

This claim, if taken literally, is naturally wrong.²⁸ But Böhm-Bawerk's language has its particularities.

So, for Böhm-Bawerk, a month's labour that is available in 1910 does not, obviously, yield anything for the economic year 1909,²⁹ but can yield 100 units of output in 1910,³⁰ 200 units in 1911, 280 units in 1912, 350 units in 1913, and so on. If, in 1910, the firm adopts an annual 'method of production', it will produce 100 units for the economic year 1910. If it adopts a biannual 'method of production', it will produce 200 units, but for the economic year 1911, and so forth. If, a year later, the same firm invested in 1911, it could only produce 100 units in 1911, 200 in 1912, 280 in 1913, and so on. It would, therefore, necessarily run one year behind in terms of productivity,³¹ in comparison to the first unit invested. The difficulty in attempting to follow this argument stems from the strange use of the term 'method of production'. Böhm-Bawerk continues: 'Of course the older outputs of previous years can realize their technical superiority in comparison with the present ones only on condition that they, too, have actually been invested in correspondingly extended roundabout processes of production'.³²

The 'method of production' is, therefore, nothing other than 'intensive' productive investment. Böhm-Bawerk assumes, therefore, that the firm produces its fixed capital itself. If such is the case, then one could say that the more time is devoted to this production by the firm, the more productive the firm will be at a subsequent point in time.

Contrary to Jevons, Böhm-Bawerk is not interested in the marginal return of capital. Instead, he is interested in the first unit invested in our imaginary firm. Thus, the more the '*Produktionsumwege*' are costly in terms of time, the greater will be the participation of the first invested unit in the subsequent production of goods intended for sale.³³ Böhm-Bawerk does not, therefore, propose anything

28. It is as if Böhm-Bawerk was saying that firm x, which annually produces 10 units, is less productive than firm y, which produces, with the same quantity of means of production, 12 units over the course of two years.

29. Böhm-Bawerk 1959, p. 273.

30. He assumes that the same thing happens twelve times in a row (so that annual output represents 1,200 units), but he does not take into consideration the eleven remaining months in order to simplify his presentation. This is a marginalist argument without the use of mathematical notions, which makes the presentation particularly confused and inaccurate.

31. Böhm-Bawerk comes up with a table for comparing the productivity of the same firm, if the latter invested for the first time in 1909, 1910, 1911, and 1912, in order to prove that between the two extremes there exists a difference of productivity of four years.

32. Böhm-Bawerk 1959, p. 274, n. 29.

33. Let us provide an example inspired by those of Böhm-Bawerk. A fisherman catches with his hands three fish per day (90 per month), which he needs in order to survive. If he manages (exceptionally) to double the time of his labour during a month, he will accumulate 90 fish and so will survive an additional month. He will be able, in that case, to spend that additional month of labour making a net. With this net, he will catch

other than to read the marginal return of capital, such as it appears in Jevons, in the opposite way. Jevons says that the marginal return of capital is diminishing. If one 'reads' this the other way round – starting from the last unit invested and moving towards the first – one would say (incorrectly) that the return of each unit is greater than that of the units that follow (that is, of the units preceding it). This is why Böhm-Bawerk concludes as follows: 'In the economic year of 1914 the contribution to the satisfaction of wants by a month's labor done in 1911 amounts to 350 units, that of a month's labor out of 1912 amounts to 400 units',³⁴ and 'the older (present) quantity of means of production is technically superior to the quantitatively equal more recent (future) one. Is this technological superiority matched by a superiority as to marginal utility and *value* as well? It most certainly is'.³⁵

In this way Böhm-Bawerk considers that he has proven that every businessman prefers current means of production (or 'the current month of labour') to future means of production (for 'technological reasons') because the profitability of the first invested unit of capital increases proportionately to the length of time it spends in the productive process.³⁶

30 fish per day (900 per month). The month of labour spent for the production of round-about means (the net) is, as a result, much more profitable, than fishing with his hands. The net's profitability, and, therefore, of the first month of labour, is measured by the results of the future fishing and is worth much more than ninety fish. For the example of the fisherman and the fish, see Böhm-Bawerk 1959, pp. 280–1. The example is used in a slightly different way to the one above. It is used in order to show that the fisherman prefers to buy 90 fish today with the promise to pay for 180 fish in the future. In this way, he would dispose of a month's time to make his net. With this net, the following month he will catch 900 fish and pay back 180. He will, moreover, be richer by a value of 630 fish! Here is a 'striking proof' of the fact that man depreciates the future and that time has a price!

34. Böhm-Bawerk 1959, p. 274.

35. Ibid.

36. Should we conclude that the first month of invested labour, to which must be added 9 years and 11 months of labour in the same productive process, is more 'advantageous' than the month of labour to which must be added 4 years and 11 months in another process? This would be a poor sophism. For, in the course of a ten-year period, one can repeat twice the five-year process of production, and there is no proof that the first businessman would make more profit than the second one. If, naturally, we are talking about a new firm beginning its activities five years after the first one, the difference between the values and the profits produced would not have anything to do with the profitability of the 'first month of labour' invested, but rather with the five-year difference of labour between the former and the latter. The only thing that Böhm-Bawerk's argument 'proves' is that it is preferable to productively invest today rather than tomorrow. Böhm-Bawerk notes that a month of labour invested in the year 1AD, to which must be added nineteen centuries of labour, would have a productivity and a marginal utility as 'high as the mountains' in relation to a month invested in 1909! And it is the first month that would have this 'productivity' and 'utility', and not the nineteen centuries of subsequent 'planned' labour and investment! Böhm-Bawerk 1959, p. 274, n. 29.

Böhm-Bawerk's argument has neither the scope nor the interest of that of Jevons. There is no rational means that makes it safe to claim that the first month of labour, invested in a firm, contributes more to its final profitability than the subsequent months. It is not possible to 'read' the marginal return of capital in the opposite way, for this return would no longer be 'marginal'. It is as if we had claimed that the instrument of labour *x* contributes more to the profitability of the firm than the instrument *y*, the two instruments being technically necessary to the production of consumption goods, because it was bought or produced earlier than the instrument *y*. Instrument *x* is made 'immobile' during a lengthier period of time than instrument *y*, but in what way could this temporal difference be said to have an impact on the quantity of the products intended for sale, or their marginal utility?

Böhm-Bawerk, however, believes that he can solve the problem of the origin of profit in a definitive and original way on the basis of the results obtained.

By recognising that firms do not produce their means of production themselves – he, therefore, also recognises, implicitly and contrary to the initial assumption, that the productivity of the firm is independent of the 'age' of the first invested unit³⁷ – Böhm-Bawerk observes that the means of production the firm buys on the market, including labour, are not current commodities, but future ones. They are not (individual) consumption goods. It seems to him right, therefore, that the businessman purchases labour at its future depreciated price. The worker, on the other hand, purchases current commodities sold at their current value. Profit thus arises in the hands of the businessman (nobody contests this): *'For his future good gradually ripens into a present good during the course of the production process, and thus grows into possession of the full value of a present good'*.³⁸

This suggests that the businessman purchases, with a given quantity of current goods, a greater quantity of the same goods at a subsequent moment.³⁹ The increase in this quantity would then be a linear function of time, because, according to Böhm-Bawerk, the more the future is remote, the more it is depreciated. In this way, profit would not have anything to do with the exploitation of labour, contrary to what the socialists think. It is not so much connected to property relations as it is to 'human nature and the technique of production'.⁴⁰

It would be scholastic to criticise this admirable theory of profit or time in economic analysis (profit is supposed to be the price of time). However, let us note the following: if this is the origin of profit, then the producers of means of

37. Which first unit would this be?

38. Böhm-Bawerk 1959, p. 301.

39. Böhm-Bawerk 1959, p. 300.

40. Böhm-Bawerk 1959, p. 301.

production, who sell 'future commodities', should have a lower rate of profit than the producers of consumption goods. In the opposite case, the former would be stealing from the latter and would be acting contrary to human nature and the technical laws of production. Moreover, if the 'age' of the productive process has no necessary relation to its profitability or productivity (*Ergiebigkeit*), from where does the improvement of supply, and, therefore, the future depreciation of the value of a given quantity of commodities, arise? Profit is supposed to stem from, essentially, the 'objective' depreciation of the future, and this needs to be explained. We do not see how Böhm-Bawerk has corrected or extended Jevons's contribution in this regard.

Chapter Fifteen

The Labour, Production and Circulation Periods

After a brief definition of these three periods, we will be in a position to examine the quantitative relations between the three functional fractions of capital.

15.1 Definition of the three periods

Marx devotes three small chapters to what he calls ‘working period’, ‘production time’, and ‘circulation time’, respectively. These constitute chapters twelve, thirteen, and fourteen, of the second volume of *Capital*.

First, why does he use the term working ‘period’, but then talk of production and circulation ‘time’? He uses the term ‘working period’ because it expresses something beyond that of ‘working time’. ‘Working time’ can be more or less intensive, productive and socially necessary; in short, this time has its place in the framework of the valorisation of value. The ‘working period’, by contrast, is a notion that solely refers to the circulation of value. It is not part of the linear temporality of valorisation, but is instead part of a repetitive and cyclical temporality.

This is also true of ‘production time’ and ‘circulation time’. These times are, in reality, also ‘periods’. In this last term of Greek origin, the idea of the cycle, as well as that of the repetition, are explicitly present. This is why it is more precise to speak of ‘production period’ and ‘circulation period’. Marx uses the term ‘time’ at certain points, and ‘period’ at others, but in both cases these two terms mean the same thing. Since there is

no 'production time' or 'circulation time' concerning the process of valorisation of value, the term used is of little importance.

Marx calls 'working period' the number of working days necessary for the production of a product. If, in order to produce a given machine, it is necessary to work during a hundred ten-hour days, the working period is one thousand hours. The length of the working period, therefore, depends on the nature of the use-value produced:

If we speak of the working day, then we mean the length of time for which the worker must daily expend his labour-power, must work. If we speak of the working period, on the other hand, this means the number of inter-related working days that are required, in a particular line of business, to complete a finished product. The product of each working day is here only a partial product, which is taken a step further day by day and receives its finished shape, is a finished use-value, only at the close of a longer or shorter period of working time.¹

It is useful to note that what is important here is not the absolute duration of the working period – whether it lasts for one or two months – but rather the hours of labour necessary for the production of a given product. A working period of thirty ten-hour days, for example, can be completed in fifteen days if the labour is organised in successive shifts. In both cases, the working period is three hundred hours. In both cases, the same quantity of circulating capital must be advanced.

The working period, defined in this way, is one of the factors determining the mass of capital that must be advanced in order to be valorised. Marx compares, for the sake of the example, a cotton-spinning industry and an industry that builds engines. The product of the cotton-spinning industry is of a discreet nature and can exit the sphere of production in very short time-periods. The building of an engine, on the other hand, requires several months of labour. Even if one assumes that the constant and variable, fixed and circulating capital, daily consumed in the two industries, is the same in both cases, the capital advanced will not be the same. The cotton-spinning industry, since it has a very short working period, has a comparative advantage. It must advance circulating capital for much shorter time-periods than the engine-building industry. The former must ensure the supply of labour-power, raw materials and auxiliaries, for, let us suppose, a week, while the latter must do so for several months. The cotton-spinning industry buys the circulating capital with a quantity of money that often returns to its point of departure and can be spent anew for the same

1. Marx 1978, p. 308.

aim, whereas the latter progressively buys the circulating capital with a quantity of money that must suffice, not for a few days, but for several months.

The longer the working period, the greater the mass of the capital advanced. Since some products require very long working periods, they can only be produced as commodities if capital has reached a certain degree of concentration and centralisation.

Economic crises have a different impact on commodities according to whether the latter require longer or shorter working periods. Those requiring long working periods are, in general, less flexible than those requiring short working periods. The firms that produce commodities of a discontinued nature can adapt their production to social demand more easily and, therefore, adapt themselves to the conditions of disruption of the social productive process. Today, one often hears about 'small, dynamic and flexible firms'.

The notions of 'fixed capital' and 'circulating capital' are part of the same temporality as the notion of the 'working period'. The first two relate to the turnover modes of the means of production, while the latter refers to the turnover mode of the product. If this turnover mode is of a continuous nature, then it requires long working periods, and a great mass of value suddenly finds itself in circulation; if it is of a discreet nature, the working periods are short and the value produced, during any given period, let us suppose annually, circulates in small doses.

The production time or period necessarily includes the working period, but it is not necessarily equal to it.

The production period is the necessary time for the production of a product. It includes, over and above the working period, the time during which 'the object of labour is subjected to natural processes of shorter or longer duration, and has to undergo physical, chemical or physiological changes while the labour process is either completely or partially suspended'.²

In Chapter One, we noted that the production time also includes the interruptions of the labour process caused by the natural limits of the labour-power, and also, therefore, the interruptions that are not required by the nature of the product. This means that when one speaks of production time, one emphasises the absolute time necessary for the production of a commodity. Production time is the time during which the means of production participate in the creation of the product. It is the time during which they are to be found in the productive sphere actively, passively, or potentially (as stocks, for example), participating in the productive process. Contrary to the working period, where the emphasis is on the necessary labour time for the production of the commodity and not on the absolute duration, here the absolute duration is of interest to us. Any given

2. Marx 1978, p. 316.

firm's working period of thirty days entails a certain number of working hours per day, let us suppose ten hours. The production period corresponding to it can also be of one month. This depends on the nature of the product. The working period is three-hundred hours distributed over the thirty days of the month. The production period also lasts one month, but it is made up of thirty 24-hour days, that is, 720 hours, of which 300 necessarily represent a period during which the means of production actively function.

The production period includes the 'inactive' production time, since the means of production also lose their value during the pauses and the interruptions of the labour process. The working and production periods can, in this case, be considered as equal. This is because the two periods coincide in time, although they do not include the same number of hours. The higher the relation working period/production period calculated in hours, the less value is 'unproductively' lost by capital, for the simple reason that this relation expresses the relative length of the interruptions to the labour process. Although the two periods have to do with the circulation of value (its cyclical process), their quotient (the working period divided by the production period) calculated in hours is one of the factors that determine the level of profitability of capital.

Like the working period, the production period concerns the turnover mode of the product. Certain products need to stay in the production process for a longer period of time than the working period, on account of their natural specificities. This extension of their stay in the productive sphere negatively influences the turnover time of the commodity, and in general produces a rise in its price. In agriculture, for example, the periodicity of production is governed by weather conditions, and the product is very often yearly. Work is not carried out regularly during the whole year in agriculture. The use of fixed and circulating capital is, for the most part, concentrated in short periods. The working period is much shorter than the production period, with the former lasting a few months and the latter lasting a year. In the case examined above, the difference between the duration of the working period and that of the production period results from a calculation in hours. To this must be added the difference arising from the very nature of the product. In the first case, the relation working period/production period, as a profitability criterion, could be replaced by the relation hours of labour (per day)/24. In the second case, one can no longer ignore the two notions 'working period' and 'production period'.

The turnover time is a notion aiming to conceptualise different phenomena. In reality, it is more precise to talk of 'turnover times' in the plural than in the singular: we saw in the previous chapter how the turnover time of productive capital is calculated. We have already discussed the two turnover times. The first one was the average necessary time for the monetary capital advanced to return to its initial form. This time is easily calculated thanks to the formula

we previously developed. The second turnover time was that of fixed capital, a technico-empirical duration. Fixed capital is replaced every x years. This is a pure observation, but a very important one, for it is at the origin of the economic cycle. Now we have to deal with the turnover time of the product, which is also that of circulating capital. The former is the sum of the production and circulation periods of the commodity, and, therefore, of circulating capital. In agriculture, the turnover time is usually one year. This is, incidentally, why GDP and other such notions are calculated on a yearly basis.

The reader of *Capital* should be surprised to find in the same volume two chapters entitled 'circulation time' (fifth chapter) and 'circulation time' (fifteenth chapter).³ The fact that two chapters in the same volume have the same title can only be explained by the incomplete character of the manuscripts that were used for the definitive edition of the second volume.

The second volume of *Capital* is without doubt a stage of the analysis that is absolutely necessary for understanding the logic and internal organisation of capital. The dialectical thinker attempting to apply the dialectical method to the field of economics takes great delight in some of its chapters. Contrary to the first volume – which is perfectly clear, although its meaning is not always easy to decode – the second volume often suffers from a lack of clarity and requires an effort of redefinition/specification of certain notions. Such is the case for the notion of circulation time.

The selling time depends on the distance separating the producer from the market, the transport means, as well as the time during which the commodities remain fixed in their natural form by way of stock. It is obvious that the journey time of a commodity is a production time for the transport industry, but a circulation time for the industry that produced the commodity in question.

The purchasing time is the necessary time for the transformation of money into productive capital. Marx writes:

In considering the second half of the circulation time, during which money is transformed back into the elements of productive capital, it is not only this conversion alone that is involved, nor only the time in which the money flows back, according to the distance of the market where the product is sold. What is also and especially involved is the extent to which a part of the capital advanced must always exist in the money form, in the state of money capital.⁴

3. In the French translation, the two chapters have different titles. The former is titled 'Circulation Period' and the latter 'Circulation Time'. Nevertheless, the two terms are synonyms. Moreover, in the original edition, the two chapters in question have exactly the same title, namely, 'Die Umlaufszeit'.

4. Marx 1978, p. 333.

Therefore, the purchasing time is, firstly, the conversion time of money into productive capital. This time becomes important when the commodities that must serve as productive capital are not found in the form of stocks on the market.

The purchasing time is, secondly, the time that is necessary for money to return from the market, that is, the time of its journey. Marx is especially thinking of the journey time of the monetary form of the commodities sold on far-away markets. Today, this fraction of the purchasing time is considerably reduced thanks to the means of communication. Money does not return from India on a ship, but rather by bank transfer.

Thirdly, when studying the purchasing time, 'the extent to which a part of the capital advanced must always exist in the money form' must be taken into account. Nowhere does Marx really specify the precise relation between this extent and the purchasing time, and then the turnover time. Let us simply note for the moment that the extent of this monetary mass increases proportionately to the duration of circulation, as well as to the scale of production. It is linked to the question of purchasing time, for the time during which a fraction of capital remains fixed to its monetary form is the purchasing time. We will see that the purchasing time in question does not come from difficulties directly linked to the general circulation of commodities but rather to the necessary continuity of production. Its effects on the valorisation of value present a certain interest and will be examined in more detail.

15.2 The turnover time and the quantitative relation between the different fractions of capital

Chapter Fifteen of the second volume of *Capital*, entitled 'Effect of Circulation Time on the Magnitude of the Capital Advanced', has a very bad reputation. Engels notes that the definitive editing of this chapter was very difficult.⁵

Engels's problems stem from the calculations done by Marx with the aim of determining, as precisely as possible, the quantitative relation between the different functional fractions of capital on the basis of the turnover time. Some of his calculations are incomplete and others inexact, hence Engels's difficulties.

Chapter Fifteen is, without any doubt, one of the less studied chapters of *Capital*. This is because a certain intellectual effort is necessary – even after the improvements and remarks by Engels – in order to follow Marx in the vertigo of calculus.

5. See the footnote in the French edition of Marx's economic writings; Marx 1968, p. 675.

Let us first of all allow Marx to determine the research object:

It should be generally noted, however, that the economists are much inclined to forget not only that a part of the capital needed in a business is constantly passing alternately through the three forms of money capital, productive capital and commodity capital, but that it is always different portions of this that possess these forms alongside each other, even if the relative magnitudes of these portions are in constant flux. It is particularly the part always present as money capital that the economists forget, although precisely this circumstance is very necessary for the understanding of the bourgeois economy, and makes itself felt as such in practice as well.⁶

Marx is, therefore, attempting to determine the necessary quantitative relation between the different functional fractions of capital. The multitude of factors determining this relation only allows for a very approximate presentation of reality. This comes at the price of a series of simplifications, hypotheses, and often laborious calculations. But the difficulties inherent in the research subject are one thing, while their economic importance is quite another. Marx calculates the rate of profit, in the third volume of *Capital*, by means of the formula $S/(C + V)$. He does so by considering that the sum of constant (C) and variable capital (V) is also the sum of capital advanced. If a part of the capital advanced is found in the form of monetary capital, and if this part is considerable, then this formula would prove extremely approximate. Marx wrote the chapter that we are examining after those of the third volume dealing with the rate of profit. Would Marx have treated the rate of profit in the same way had the chronological order of his research corresponded to the logical order of his works? Would the results of chapter fifteen of the second volume have had any impact on the definitive editing of certain chapters of the third volume?

Paradoxically, or, rather, accidentally, the results of this chapter would not have any important consequences for the editing of the third volume. In order to show this, we have attempted to formalise the most important results of chapter fifteen. The calculations are reduced to the strict minimum.

We know that the turnover time of capital is the period during which the initial value goes through its different functional forms in order to return, in the end, to the form it started from. It is useful to consider here the circuit of productive capital: $P \dots C-M-C \dots P$. As we have already noted, the production of surplus-value does not influence the turnover of capital. Moreover, we know that the fixed capital that is progressively transformed into money must form a 'reserve fund', so that in the end of its life it can be replaced by a new fixed capital. We can, therefore, set aside fixed capital as well as surplus-value.

6. Marx 1978, p. 333.

The P in our circuit represents, therefore, the circulating capital only. Production lasts for a certain time, which we have called production period or pt . It is interrupted by the circulation time or ct , so that the successive circuits of productive capital present themselves in the following way: $pt - ct - pt - ct - pt$, and so forth. For production to be continuous, the value productively invested in the first production period must be reduced so that the second production period can begin before the value going through its ct has returned to its initial form. What is the maximum value (V_{prod}) that can be productively invested, given the imperative of the continuity of production? This is the first question Marx asks himself.

As we have already seen, his answer can be formalised in very simple mathematical terms: $V_{prod}(pt) = Va \cdot pt/T_{turn}$ and $V_{prod}(ct) = Va - (Va \cdot ct/T_{turn})$. Va represents here the total value advanced, while T_{turn} ($T_{turn} = pt + ct$) represents the turnover time. These two formulae are functions of V_{prod} in relation to the production and circulation time, respectively. The minimum value (V_{cir}) that must be invested during the circulation period in order to enable the continuity of production is obviously equal to that which remains of Va when we subtract V_{prod} ($Va = V_{prod} + V_{cir}$). This minimum value can also be expressed as a function of the production and circulation time: $V_{cir}(pt) = Va - (Va \cdot pt/T_{turn})$ and $V_{cir}(ct) = Va \cdot ct/T_{turn}$, respectively. The relation of the circulation time to the production time is equal to the relation of V_{cir} to V_{prod} : $ct/pt = V_{cir}/V_{prod}$.

What is the exact meaning of these mathematical relations? The production periods of capital appear as a series of productive acts without temporal interruptions. If one concentrates on the amount productively invested in each pt , everything happens as if circulation time had no positive or negative influence on the valorisation of value. The turnover time of capital initially invested in means of production (in the form of circulating capital) seems to be equal to its production period. Thus, the movement of capital appears as a succession of the $pt - pt - pt$ type. Marx tells us that this continuity is not pointless. The above relations precisely show that what is gained in productive time is lost in space, that is to say, in value that could be productively invested. If, for example, we have an initial capital of 100 invested in circulating capital at the beginning of year x , and if pt is half a year and ct half a year, we will produce during the year value equal to 100 (to which we need to add the surplus-value). For production to be continuous, the initial value must be divided into two equal fractions, but the value produced during the year will be – both before and afterwards – equal to 100.

This division of value into two fractions results in an extension of the turnover time of capital. This extension comes from the purchasing time of the fraction reserved for the second production period. In our arithmetical example, the initial value of 100 carries out a complete turnover in a year. The division of this

value into two equal fractions results in an extension of the turnover time, for the first amount of 50 carries out a complete turnover, whereas the second one begins its first turnover after the completion of the first production period. It thus carries out only 50 percent of its normal turnover (its production time only). The two amounts – examined independently – have the same turnover time (one year), but the amount reserved for the second production period begins its turnover six months later. Everything happens as if the turnover time of (solely) the first turnover of this last fraction was not twelve months but eighteen. The extension of the average turnover time thus produced is, therefore, a meaningless circumstance.⁷

However, we have taken a step forward in order to define more precisely the notion of purchasing time. We see that a fraction of capital remains fixed to its monetary form during a given period of time. This period amounts to purchasing time for capital. This purchasing time does not stem from difficulties in purchasing means of production or other things of this kind, but solely from the necessity of keeping production going. In order to better specify the economic importance of this purchasing time, we must mention the notion Marx calls the 'liberation' of capital.

In our arithmetical example, the purchasing time that interests us is a negligible phenomenon, for it only exists during the first production period. In certain circumstances, however, the purchasing time thus produced is not the exception but the rule. It is a more or less constant phenomenon. Everything depends on the quantitative relation between production time and circulation time. Unfortunately, we cannot spare the reader an arithmetical example.

Let us assume the following:

- (1) Purchasing time or $put = 0$.
- (2) Production period or $pt = 9$ weeks. Production period = working period.
- (3) Selling time or $st = 3$ weeks ($st = ct$).
- (4) Periodicity of payment of wages and raw materials: beginning of each week of pt .
- (5) Unit of measure (R) of the number of turnovers (n): one year (= 48 weeks).
- (6) Value advanced or $Va = 1200$ monetary units.

Since $V_{prod}(pt) = Va \cdot pt/T_{turn}$ and $V_{cir}(ct) = Va \cdot ct/T_{turn}$, then $V_{prod} = 900$ and $V_{cir} = 300$.

7. The longer the temporal unit of measure (R), the less this extension will be perceptible. It will be even less perceptible if it is distributed over several R s, if the turnover time of fixed capital is taken into consideration.

During the time that the first commodities produced of a value of 900 are circulating, the value that remains in a monetary form (300) is transformed at the beginning of each week into productive capital. During the twelfth week of *R*, the firm is left without monetary capital. At the end of this week, however, those 900 units fixed in the commercial form during the tenth, eleventh, and twelfth weeks, return. Of these 900, 600 are necessary for paying for the circulating capital of the six weeks that still have to be covered for the second production period to be completed. Of these 900, therefore, there remain 300 productively unemployed units during a period of six weeks, that is, throughout the second production period. This 'liberated' capital of 300 units will cover the payments of the first three weeks – the nineteenth, twentieth and twenty-first weeks – of the third production period, which coincide with the fixation of the 900 units to the commodities created at the end of the second production period, and so on and so forth. We see, therefore, that the two amounts become mixed up in their movement. However, there is one point that is established: with the exception of the periods during which the commodities go through their selling time, a capital of a value of 300 units is constantly found in monetary form.

The total selling times of the commodities amount to fifteen weeks. During the rest of *R*, namely, during 33 weeks, a value of 300 units (Marx's 'free' value) goes through its purchasing time and finds itself in monetary form. Although we initially assumed that there is no purchasing time, that is to say, that circulation time is not extended because of circumstances connected with the market (capital finds in the market what it needs), the continuity of production itself produces a purchasing time (not a permanent one, but in any case a very long one). The purchasing time thus produced has no positive or negative influence on the valorisation of value. It is strictly neutral: whether or not there is liberation of capital, the value produced during *R* does not change by a single penny.⁸ This purchasing time has no other influence on the turnover time of capital than that examined with the help of the previous numerical example.⁹ Engels's critical remark, in relation to the 'liberation' of capital, seems correct: 'The uncertain results of these laborious calculations led Marx to attribute too much importance to a circumstance which, in reality, is, to my mind, insignificant. I refer to what he calls the "liberation" of money capital . . . It is assumed that production continues without interruption on the same scale, and, for this to be the case,

8. If production is assumed to be discontinuous, then the value produced during *R* (setting aside surplus-value) will be in our example 4×1200 ; if production is assumed to be continuous, the value produced will be $5 \frac{1}{3} \times 900$, therefore 4,800 monetary units in both cases (we multiply the number of production periods during *R* by the value invested and produced in a production period).

9. In the second numerical example, only the first nine weeks of the purchasing time of an amount of 300 units result in a negligible extension of the turnover time.

money must be available; it must, therefore, return, “liberated” or not. If production is interrupted, liberation stops at the same time’.¹⁰

Nevertheless, purchasing time or the liberation (*Freisetzung*) of capital – a more or less insignificant circumstance for each individual capital and a sub-product of the continuity of the productive process – is not an entirely negligible phenomenon. At the level of society, sums of money are grouped together and go through their purchasing time for each individual capital. It follows from this that a certain quantity of money is constantly available. This money, through the credit system, facilitates the movement of capital in the various productive branches.

It is now necessary to return to the point from which we started. As we have seen, Marx criticises his contemporary economists for forgetting the fraction of capital in monetary form, despite this factor being ‘very necessary for the understanding of the bourgeois economy, and [making] itself felt as such in practice as well’. After such an assertion, Marx attempts to determine this fraction by means of a series of endless calculations that seem to lead him nowhere. But why is this fraction necessary also in practice? It seems to us that Marx is not satisfied with the formula $S/C + V$ for the rate of profit (S represents the surplus-value annually produced, C the constant capital advanced, and V the variable capital advanced), since he considers it too approximate. But he goes down a path that leads nowhere; this path being that of the ‘liberation’ of capital, since the ‘liberation’ of capital does not play any role in the valorisation of value or the rate of profit. The entire problem is to be found in this: how can both the monetary capital advanced, which does not appear in the value of productive capital, and the turnover time of capital, be integrated into the formula of the rate of profit?

This problem can be solved. As has already been noted, the production process presents itself as a series of the $pt - pt - pt$ type. In each pt a quantity of money is invested, which, however, cannot be the totality of the value of the advanced capital. Thus, the classic formula (the rate of valorisation must be calculated, according to Marx, on the basis of the totality of the advanced value) becomes $S/(C + V + M)$, M symbolising the initially advanced money capital, but not immediately transformed into productive capital, since its function is to enable the continuity of the productive process. More specifically, this value M (or V_{cir}) is also destined to assume the form of constant and variable capital, but as soon as it assumes these forms (progressively during the circulation period), another part of the capital advanced is metamorphosed into M . This part M of the advanced value represents, therefore, the extra value in relation to

10. Marx 1968, pp. 675–6.

the maximum value of the advanced capital that is simultaneously invested in the form of constant and variable capital.

In order to continue to use our arithmetical example, let us assume that the variable part of the circulating capital represents, for example, 300 units, and that the synchronic rate of exploitation is 100 percent. We have, therefore, the following synchronic rate of valorisation: $s/(c + v) = 300/(600 + 300) = 1/3$ or 33.33 percent.

The annual rate of valorisation of capital (Pr) would be, if we set aside M , the following:

$$Pr = \frac{S}{C + V} = \frac{1600}{600 + 300} = 1.7777 \text{ or } 177.77 \text{ percent}$$

(As far as the annual surplus-value is concerned, let us remind the reader that during each pt of 9 weeks, a surplus-value equal to 300 is produced, and, therefore, 1600 during 48 weeks).

We would obtain exactly the same result calculated by the formula of the Pr that includes the turnover time of the advanced capital ($Tturn$) if we set aside the circulation period (ct), so that $Tturn = pt$:

$$Pr = \frac{s}{pt(c + v)} = \frac{300}{9/48(600 + 300)} = 1.7777 \text{ or } 177.77 \text{ percent}$$

If we now want to take into consideration the fraction M of capital, in order to calculate the annual rate of profit, it is enough to know the variables of the synchronic rate of valorisation, and the turnover time of the total capital advanced:

$$Pr = \frac{s}{Tturn(c + v)} = \frac{300}{9/48(600 + 300)} = 1.3333 \text{ or } 133.33 \text{ percent}$$

This result corresponds exactly to that which could be calculated on the basis of the classic formula of the annual rate of profit, transformed in such a way as to take into consideration the fraction M of the advanced capital:

$$Pr = \frac{S}{C + V + M} = \frac{1600}{600 + 300 + 300} = 1.3333 \text{ or } 133.33 \text{ percent}$$

In other words:

$$Pr = \frac{S}{C + V} = \frac{s}{pt(c + v)}$$

$$Pr = \frac{S}{C + V + M} = \frac{s}{Tturn(c + v)}$$

By introducing the turnover time of capital in the formula of the rate of profit, the value advanced in monetary form destined to ensure the continuity of production

(M or V_{cir}) is also taken into account – without this explicitly appearing in the formula – on the condition, of course, that this value is not ‘forgotten’ when the average turnover time is calculated.

The classic formula of the rate of profit is, indeed, approximate, for it ignores the part M of the money capital advanced, or, if we prefer, it ignores the circulation time of capital (ct). However, this would only have a limited impact on the editing of the third volume of *Capital*. When, in that volume, Marx deals with the formation of the average rate of profit, production prices, and so on, he places the turnover time in parentheses in order to facilitate his calculations. Since this part of the money capital advanced is ‘included’ in this turnover time, Marx’s simplifications do not appear twice.

Marx had the intention of returning, in the third volume, to the turnover time and its effect on the rate of profit. Engels did this for Marx in chapter four of the third volume entitled ‘The Effect of the Turnover on the Rate of Profit’. But the editor of *Capital* does not respect all the logical consequences of the discussions included in the second volume. Thus, Engels presents many arithmetical examples aiming to prove the influence of the turnover time on the rate of profit, which, however, ignore the fraction M of the money capital advanced.¹¹

11. The reader can refer to Duménil’s detailed critique of these discussions by Engels; see Duménil 1978, pp. 286–97.

Chapter Sixteen

The Annual Turnover of Social Capital (The Schemas of Reproduction)

When analysing the circuit of commercial capital $C'-M'-C \dots P \dots C'$, we limited ourselves to the assumption that capital finds on the market the sales markets it needs. Each individual capital depends on the demand coming from other capitals, including the demand coming from 'variable capital', that is, from the working-class, as well as the demand from abroad, whether capitalist or not.

Individual capitals are fractions of the social capital. Their turnover movements are, at the same time, the particular links of the turnover of social capital. The question of the social demand can no longer, as a result, be considered external to social capital, for the latter creates and satisfies its own demand. Whether and to what extent social capital remains dependent on foreign sales markets or imported commodities is an additional problem that Marx ignores for the moment. He assumes a closed economy.

The turnover of social capital is a periodical reproduction of the prevailing social relations, value, and use-value, on an expanded scale. It implies that the singular capitals will find on the market the means of production, the labour-power, and the sales markets, they need. For this to be possible, the different fractions of capital must co-operate as particular and relatively independent members in order to maintain the whole system. This co-operation is obviously neither planned nor conscious, but is the result and product of the spontaneous forces of the market.

We will first present Marx's schemas of reproduction in sub-section 16.1, and then analyse their economic meaning in sub-section 16.2.

16.1 Presentation of the schemas of reproduction

What Marx calls 'simple reproduction' is part of expanded reproduction, and this is why it is a real phenomenon and not a simple hypothesis that rarely corresponds to reality. It is first assumed that value and its various elements (s , c , v), as well as use-value, are reproduced on the same scale. Over and above accumulation, that is, the productive investment of a part of surplus-value, capital must reproduce itself on a constant scale. Thus, attention is initially drawn towards the following question: 'How is the *capital* consumed in production replaced in its value out of the annual product, and how is the movement of this replacement intertwined with the consumption of surplus-value by the capitalists and of wages by the workers?'¹

Obviously, such a complex problem can only be solved at the cost of crude simplifications. Thus, the analysis begins without fixed capital or monetary production. Moreover, Marx divides the branches of production into two large sections according to whether they produce means of production (department I) or means of consumption (department II). The results of his research point to certain relations of proportionality between these departments that are far from being uninteresting.

The annual gross value of an economy is the sum of the surplus-value and the variable and constant capital (re)produced during the year by all the branches of production. This value can be broken down into two fractions: the value produced by department I, and that produced by department II. This is an attempt on Marx's part to determine the relations of proportionality that must exist between these two departments, so that they can reproduce themselves on a constant scale.

The net annual value is the sum of the surplus-value and the variable capital of the two departments, which can also be broken down in the way indicated above. The gross value of output (the commodities annually produced) can be written in the following way:

Department I: $Ic + Iv + Is = Vi$ (gross annual value of the means of production).

Department II: $IIC + IIv + IIs = VII$ (gross annual value of the means of consumption).

It is clear that $Ic + IIC$ represents value inherited from the past. This is what remains from the sum of gross values if the sum of net values is subtracted.

1. Marx 1978, p. 469.

It is not difficult to deduce the relations of proportionality between the two departments that must exist for production to be simple, that is, for the production of value and output to be an identical repetition every year.

The value of the means of production V_i must replace the value inherited from the past, so that, the following year, the same process can start all over again: $V_i = I_c + I_v + I_s = I_c + I_{Ic}$. It follows from this that $I_{Ic} = I_v + I_s$. In other words, the net value of department I is equal to the value inherited from the past of department II (gross value – net value).

The value of the means of consumption V_{ii} must satisfy the annual individual needs of the workers and capitalists. It goes without saying that the entire income is supposed to be spent. It follows from this that $V_{ii} = I_{Ic} + I_{Iv} + I_{Is} = I_v + I_s + I_{Iv} + I_{Is}$. The net total value is equal to the value of the means of consumption. By eliminating the terms that appear on both sides of the formula, we obtain the same relation as before: $I_{Ic} = I_v + I_s$.

Therefore, we conclude that the demand of department II in means of production must correspond to the demand of department I in means of consumption. The supply of means of production that is not absorbed by department I must be absorbed by department II, and the supply of means of production that is not absorbed by department II must be absorbed by department I. This is the essential part of simple reproduction.

This being the case, it is not difficult to remove the initial simplification according to which everything happens without fixed capital. Individual capitals have different turnover times. Some of them must replace their fixed capital in kind during the year that interests us; meanwhile, others must, through the sale of their commodities, transform the consumed value of their fixed capital into money in order to replace in kind their fixed capital later on. Marx devotes complex and long discussions to this question, the essential parts of which we will sum up, if only to facilitate the reading of the text itself.

Let us focus on the inter-departmental exchange $I_{Ic} = I_v + I_s$. The entire difficulty consists in this: the part that corresponds to the wear and tear of fixed capital not yet replaced in kind is present in the value of the means of consumption I_{Ic} that are exchanged for $I_v + I_s$. This part must be exchanged against an equivalent part of $I_v + I_s$. Initially, this seems impossible, for this part is destined not to replace capital in kind – whether fixed or circulating capital – but instead to the creation of a ‘reserve fund’. Moreover, if the value of $I_v + I_s$ is not entirely realised, then the value of I_{Ic} cannot be realised in its entirety either. Everything that has been said of simple reproduction seems to collapse.

But this problem is only apparent. To simplify, let us introduce numbers in the relation: 1000v + 1000s of department I must be exchanged against 2000c of department II. Let us suppose that 200c out of the 2000c constitute the value of the worn out fixed capital that must be saved in the form of a ‘reserve fund’. The

rest is constant capital (fixed or circulating) that must be replaced in kind. Let us also suppose that the value of fixed capital to be replaced is 200. Marx divides IIc into two groups according to whether the capitalists replace in kind their fixed capital (group 1) or not (group 2). For example, it is possible that the successive exchanges mediated by money appear in the following manner:

(1) 1000*v* in the form of means of production also exist in the form of wages, and, therefore, in monetary form. Workers use their wages to buy means of consumption. With the same money, department II buys from department I means of production. At the end of these transactions, a value of 1000*s* remains in department I, and a value of 1000*c* in department II. The 1000*v* advanced in wages return to their starting-point so as to fulfil the same function the following year.

(2) Department I advances 600*m* (*m* means that the sum advanced is in monetary form) to buy 600*c*. The same 600*m* return to their starting-point because department II buys 600*s* from department I. As a result, there remains a value of 400*c* in department II (means of consumption), and a value of 400*s* in department I (means of production), that have not yet been exchanged.

In fact, who advances what sum, and who purchases first and sells afterwards, is of little importance. The money advanced returns to its starting-point. We have simply eliminated 1600 from each side of our equation and can now concentrate on the last 400 – where the money advanced does not return to its starting-point.

(3) Let us now suppose that the remaining value of 400*c* (means of consumption) is unequally distributed between the two groups of department II: group 1 = 100*c*, group 2 = 300*c*. Let us also suppose that group 1 buys 200*s* (means of production) in order to replace in kind its fixed capital, and 100*s* in order to replace its circulating capital, whereas group 2 buys 100*s* in order to replace its circulating capital. Group 1 must be in a position to advance 300*m* to buy means of production of an equivalent value. These 400*m* return to department I, but they do not return to their starting-point. Group 1 advances 300*m* and receives 100*m* because it only possesses 100*c* that are for sale (the laws of exchange are not violated, since group 1 also possesses a new fixed capital of 200*s*). Group 2 advances 100*m*, but receives 300*m* (of which 200*m* correspond to the wear and tear of its fixed capital) through the sale of its commodities (300*c*). This specific unfolding of the exchanges of the last 400*c* against 400*s* is only one possibility among many others. Marx presents several possible variants of such exchanges.² Whatever the variant, the laws of exchange are not violated. Group 1 replaces in kind its fixed capital. Group 2 saves in the form of 'reserve fund' a value of

2. Marx 1978, pp. 533–41.

200 corresponding to the wear and tear of its fixed capital and reproduction at a constant scale can continue.

What is, as a matter of fact, the precise meaning of the above? Capital that saves the value of the wear and tear of its fixed capital annually throws into the market (in the form of commodities), a value that is greater than that which it withdraws (also in the form of commodities). Thus, it may seem that the exchange $IIc = Iv + Is$ is impossible. However, that capital, which replaces in kind its fixed capital, in the same period, throws into the market a quantity of value in the form of commodities that is smaller than that which it withdraws in the form of commodities. For simple reproduction to take place, the 'more' and the 'less' must compensate for each other. The department that replaces its fixed capital (in our example department II) throws into the market the money that will return to it through the intermediary of the other department. Each group that replaces its fixed capital is, to a certain extent, in the same situation as a new capital. In order to purchase its fixed capital, it throws into monetary circulation the money that, at the end of the day and sooner or later according to the velocity of the turnover of capital, will return to its starting-point. Meanwhile, this money is used for the realisation of the value of the commodities and for the creation of the 'reserve funds' of the other capitals.

As in the case of simple reproduction, the analysis of expanded reproduction uncovers certain interesting relations of proportionality.

First, expanded reproduction implies that a part of the annual surplus-value of department I, in the form of constant capital, is destined to productive investment. This investment modifies many other parameters of the process of reproduction. If department I invests a part of its value added in the form of constant capital, it must also invest in variable capital. A greater quantity of value in the form of means of production will be produced, which will have to be partly absorbed by department II. But if IIc increased, Iv should also increase proportionately. Let us present, formally, the production of the two departments:

Department I. $Ic + Iv + Is$. This surplus-value is distributed, in the course of the annual period between ic (accumulation in Ic), iv (accumulation in Iv), and is (the capitalists' individual consumption). The annual production of department I can, therefore, be written in the following way: $Vi = Ic + Iv + ic + iv + is$.

Department II. If the surplus-value of department II is divided in the same way, we obtain the following schema: $Vii = IIc + IIv + iic + iiv + iis$.

The relation $IIc = Iv + Is$ of simple reproduction is necessarily transformed into $IIc + iic = Iv + iv + is$. Why? Because, in a condition of equilibrium, the value of the means of production that has not been absorbed by department I must be absorbed by department II. Department I absorbs Ic so as to replace its old constant capital, to which it adds a value equal to the part of the accumulated surplus-value in the same department that is in the form of constant capital (ic).

Moreover, this relation is the result of the equilibrium between supply and demand in means of consumption and means of production. The total demand in means of consumption corresponds to the left side, while the supply corresponds to the right side, of the following formula: $Iv + iv + is + IIv + iiv + iis = IIc + IIv + iic + iiv + iis$.

When the terms found in both sides of the equation are eliminated, we obtain: $Iv + iv + is = IIc + iic$.

In the same way, the total demand in means of production must be equal to the total supply: $Ic + ic + IIc + iic = Ic + Iv + ic + iv + is$. It follows from this that $IIc + iic = Iv + iv + is$.

The discussion that Marx devoted to the question of expanded reproduction requires some reflection because the author is not presenting his ideas to the reader. He is thinking aloud, as it were, in the form of writing. His calculations are sometimes clumsy, for the simple reason that these are research calculations and not ones for presentation. However, let us examine one of Marx's clear arithmetical examples:

First annual cycle:

Department I. $4000c + 1000v + 1000s = 6000$.

Department II. $1500c + 750v + 750s = 3000$.

Let us assume that 500s of department I are destined to accumulation, of which 400s are in constant capital (ic) and 100 in variable capital (iv), so that the relation of constant to variable capital remains constant ($4/1$). Thus, from the total surplus-value in department I, 500 remain. Only half of the annual surplus-value of department I is destined to the individual consumption of the capitalists (is).

Since $Iv + iv + is = IIc + iic$, $iic = 100$, if the relation c/v is assumed to remain constant ($2/1$), department II must invest an additional variable capital of 50 (iiv). From department II's surplus-value, 600 remain that are destined to the individual consumption of the capitalists: $iis + (100) iic + (50) iiv = 750s$.

Total supply and total demand in means of consumption and production should now be in equilibrium:

Department I, means of production

Supply: 6000.

Demand: $4000 (Ic) + 400 (ic) + 1500 (IIc) + 100 (iic) = 6000$.

Department II, means of consumption

Supply: 3000.

Demand: $1000 (Iv) + 100 (iv) + 500 (is) + 750 (IIv) + 50 (iiv) + 600 (iis) = 3000$.

Second cycle:

Department I. $(4000c + 400ic) + (1000v + 100iv)$. The accumulated capital is obviously added to the initial capital. Thus, the production in the second cycle is: $4400c + 1100v + 1100s = 6600$.

Department II. $(1500c + 100iic) + (750v + 50iiv)$. Annual production of the second cycle: $1600c + 800v + 800s = 3200$.

The rate of exploitation is assumed to be constant (100 percent). The rate at which surplus-value is productively invested, and distributed between constant and variable capital, remain constant in each department. The economic equilibrium implies the distribution of the annual value of the second cycle in the following way:

Department I: $ic + iv = 550s$. Since $ic/iv = 4$, $ic = 440$, $iv = 110$.

$1100s = 440 (ic) + 110 (iv) + is$, $is = 550s$.

Department II: $Iv + iv + is = IIc + iic$, or $iic = 1100 (Iv) + 110 (iv) + 550 (is) - 1600 (IIc) = 160$.

$iic/iiv = 2$, therefore, $iv = 80$. $800s = 160 (iic) + 80 (iiv) + iis$, $iis = 560$.

Thus, the supply and demand of the two departments are in equilibrium.

Supply of Department I: $4400c + 1100v + 440ic + 110iv + 550s = 6600$.

Demand of Department I: $4400Ic + 440ic + 1600IIc + 160iic = 6600$.

Supply of Department II: $1600c + 800v + 160iic + 80iv + 560iis = 3200$.

Demand of Department II: $1100Iv + 110Iv + 550is + 800IIv + 80iiv + 560iis = 3200$.

Third cycle:

Department I: $4840c + 1210v + 1210s = 7260$.

Department II: $1760c + 880v + 880s = 3520$.

And so on.

At the fifth cycle of reproduction, departments I and II together produce a gross value of $8784c + 2782v + 2782s = 14348$. If the annual rate of valorisation is calculated, it will be shown at the end of this five-year period that this rate is slightly lower than at the beginning, although the relations c/v , s/v are, in each department, constant. This slight fall in the rate of valorisation comes from the rise in the relation c/v of total capital during the first three years of turnover. During the fourth and fifth years, this relation stabilises. The initial relation c/v of total capital is lower than the relation c/v of the part of the total surplus-value invested in constant and variable capital from the first to the third cycle:

$$\begin{array}{rcl}
 ic + iic & & Ic + IIc \\
 \hline & \rangle & \hline \\
 iv + iiv & & Iv + IIv
 \end{array}$$

In other words, the organic composition of capital increases at the same time that the rate of exploitation remains stable during a period of three years. This results in the fall of the rate of valorisation. This fall is very limited, but this is not the reason why Marx does not discuss it. He completely ignores the behaviour of the rate of profit for a very simple reason: by choosing other numbers and other rates, one can have the rate of profit increase or decrease at will.

16.2 Interpretation of the schemas of reproduction

If Marx speaks neither of the rate of valorisation, nor of its tendency to rise or fall, nor of the organic composition of capital, and if he chooses such numbers that do not draw the reader's attention to these problems, it is because the schemas of accumulation are part of a radically different problematic.

Here are the conditions for a more or less balanced expanded accumulation, says Marx. The mathematical model that sums them up is merely a model developed by the economist on the basis of a series of assumptions and simplifications. But the economist chooses his numbers and his rates arbitrarily, so that his model can be coherent. The entire problematic of reproduction is based on a hypothetical syllogism: 'If we want a to ..., then b must ...'. Hence, the real question: who forces singular capitals (real and not imaginary capitals), thousands of decisions taken independently, to conform to any coherent schema of reproduction, a schema to which all the capitals participate but none controls? The answer to this question is the third and final theoretical volume of *Capital*.

This did not prevent many big names of Russian, German and Austrian Marxism to develop the most paradoxical theories, ranging from the possibility of a harmonious development of capitalism *ad infinitum*, to that of a more or less imminent collapse of capitalism under the weight of its economic contradictions. All these theories were based on the same schemas of reproduction. This discussion is of great interest, but not so much from an economic point of view. It could be one of the privileged objects of the sociology of knowledge applied to 'Marxism'. How is it possible, for example, that an author such as Rudolf Hilferding can defend – in such a famous book as *Finance Capital* – such unrefined theses on the schemas of reproduction and crises, as if he had never opened the third volume of *Capital*? How is it possible that Otto Bauer,³ another 'neo-harmonicist' of the time, could be so careless in choosing the hypotheses of his

3. Bauer 1912–13, pp. 831–8, and 862–74.

model (in his critique of Rosa Luxemburg),⁴ to lead Henryk Grossman to show – with the same set of assumptions no less(!)—that the process of reproduction leads instead to capitalism's breakdown.⁵

Those interested in this issue can refer to Roman Rosdolsky's book *The Making of Marx's 'Capital'*.⁶ This book contains a presentation and critique of the positions of the Austro-Marxists (especially Bauer, Eckstein, Hilferding and Kautsky) on this question. Rosdolsky does not limit himself to a denunciation of the immediate and all too obvious political motivations of these positions: if there are no crises, there are no revolutions either. Imaginary economic harmonies and real political reformism form a happy couple. Rosdolsky considers that these positions are, in part, the result of an inability to understand Marx's dialectical method. He also presents the Russian discussion between the 'legal Marxists' and the 'Narodniks'. He points out, moreover, some theoretical shortcomings in Rosa Luxemburg's work and some mistakes in that of Nikolai Bukharin. Rosdolsky is also critical of Grossman's theory of the breakdown of capitalism. Rosdolsky's is a remarkable account – precise, short and clear. Let us note in passing that Grossman, a remarkable author (despite his mistaken opinion about the breakdown of capitalism), and not very well-known in France, subsequently qualified his position on the issue: 'there is no "automatic" breakdown of an economic system – however weak as it might be; it must be overthrown'.⁷

Marx's schemas of reproduction have been much better understood, refined and applied by contemporary authors in order to explain various phenomena. Thus, Mandel introduces a third department – that of the 'means of destruction' – to show the important and specific economic role of arms production in the process of the reproduction of capital since 1940.⁸ Hugues Bertrand also introduces a third department, the 'export department', to show the increasingly important role of foreign markets for the French economy in recent years.⁹ The starting-point of the regulation school is a precise interpretation of Marx's schemas of reproduction. Lipietz sums up the most important aspects in a few lines:

In mathematical terms, a régime of accumulation can be described as a schema of reproduction... There is of course no reason why all individual capitals should come peacefully together within a coherent schema of reproduction. The régime of accumulation must therefore be materialized in the

4. Luxemburg 2003.

5. Grossman 1992.

6. Rosdolsky 1977b, pp. 445–506.

7. Grossman 1943, p. 520.

8. Mandel 1999, Chapter Nine. See also Mandel 1968, Vol. 2, Chapter Nine.

9. See especially Bertrand's article entitled 'France: modernisations et piétinements', in Boyer 1986b, pp. 67–105.

shape of norms, habits, laws and regulating networks which ensure the unity of the process and which guarantee that its agents conform more or less to the schema of reproduction in their day-to-day behaviour and struggles (both the economic struggle between capitalists and wage-earners, and that between capitals).

The set of internalized rules and social procedures that incorporate social elements into individual behaviour (and one might be able to mobilize Bourdieu's concept of *habitus* here) is referred to as a *mode of regulation*.¹⁰

Let us return to Marx. Since the conditions of equilibrium are arbitrarily and summarily presented, the question that faces us is clear. Precisely who forces capitals to approximately respect a schema of accumulation? Not such and such a schema, but a schema of reproduction in general. And why do capitals, suddenly and periodically, seem to rebel against their own prior reality?

The first volume of *Capital* taught us that value is produced and realised, while the second volume showed that value circulates. The third volume will teach us that value gives itself a particular content, a more or less concrete external reality, the necessary means for it to be valorised and to circulate, grow and maintain itself. We should be sufficiently trained to be able to recognise its face in its distorting mirrors and ideological whims, in its phenomenal aspect where its content can be found in its most developed form. For, in the last analysis, distortion is the form in which the completed content of value manifests itself.

10. Lipietz 1987, pp. 14–15.

Part Three

Organic Time: The Unity of the Time of Production and the Time of Circulation

Introduction

Capital as a social relation presents itself as a specific organisation of time. Socially necessary labour time, surplus labour time or surplus-value, labour time necessary for the reproduction of the working class, dead (past) labour time or constant capital, living (current) labour time or variable capital, working day and flexibility of working time, are the main categories of the time of production of value, of capital's productive process. This is a linear, abstract, divisible, supposedly measurable and calculable time, the time of a clock if not a chronometer. Naturally, it eludes the measurement procedures of the so-called exact sciences. Nonetheless, to prove this, we have skipped several hundred pages to land in the organic time of the third volume of *Capital*. Assuming that the reader is more or less acquainted with intermediary categories, we have (exceptionally) taken the risk of not following the order of the logical steps taken by the author of *Capital*.

The time of circulation of capital unites with the above time. Turnover time, circulation time, production time, working period, fixed and circulating capital, are the main categories of this cyclical, periodical and repetitive time. This time is situated at a lower level of abstraction than that of the time of production. Capital appears as the subject; the commodity, money and the productive unit as its organic parts, as the moments of an indivisible unity. The time of production is not absent from this picture. The cycles of capital, such as they are presented, do not ignore surplus-value, or the conservation and the multiplication of value thanks to labour, or constant and variable capital. This is why

the cyclical time is already an organic time. However, the categories of the time of valorisation, throughout the second volume of *Capital*, appear in the least illuminated part of the stage. The worker and the capitalist remain in the shadow of the buyer and the seller, and the time of exploitation remains behind turnover time.

In reality, *Capital* does not begin with the productive process *stricto sensu*, but with an initial approach of circulation as a moment of production. Simple circulation, as we have outlined in detail, contradicts itself, and thus becomes the witness of an act of theft, a mysterious time hidden in the commodity, a surplus whose source cannot be the process of circulation. It was, therefore, necessary to move on to another stage, to abandon the sellers and the buyers in their world of equality and justice, so as to observe the actors of the play on the scene of the crime.

Nonetheless, surplus-value, which is produced in the production process, is realised in the legitimacy of circulation. It is nothing if the commodity is not sold. Circulation (in the strict sense of the term) refers to production, and production in its turns refers to circulation. Therefore, capital cannot be grasped except as the unity of production and circulation, or as the cyclical process of reproduction. Production proves to be a moment of circulation, and vice versa. They only acquire meaning through one another.

Thus, the categories of the productive process divide into two. Next to the categories of production as process of valorisation appear the categories of production as moments of circulation (in the broad sense of the term). This splitting in two logically follows the analysis of the temporality of production. It is obvious that notions such as 'fixed capital' and 'circulating capital', which can be distinguished from each other by the specific turnover mode of their value, presuppose the analysis of value and labour time. The production period and the working period presuppose a given working day, a certain degree of intensity and labour productivity; the annual (diachronic) rate of surplus-value presupposes a synchronic ('real' in Marx's words) rate, and, therefore, a given rate of exploitation, and constant and variable capital, and so on.

The circulation process, like the production process, was already the 'whole' of capitalist production. In the third volume of *Capital*, titled 'The process of capitalist production as a whole', we are dealing with, in reality, a higher degree of unity between the two, with the reappearance, at the front of the stage, of the exploitation relation, as well as the time of production next to the exchange relation and circular time. It is in the third act of our play where all the actors are on stage at the same time. Exploiters and exploited, sellers and buyers, appear on stage together, simultaneously, as happens in apparent reality. But now we

are in the presence of a theatrical representation of this reality, which is, as a result, reflected, recomposed and purified of all that is contingent and inessential. The process as a whole is the unity of the time of production and the time of circulation, the analysis of the concrete forms – such as they appear at the surface of society – that their simultaneity and interpenetration give rise to, and at the same time a critique of the representation that this simultaneity and interpenetration also give rise to. We are now entering an organic time to the power of two, a complex time, where the ‘internal’ and the ‘external life’ of capital are reflected in each other and united without becoming identical.

The third volume of *Capital* is not concerned with ‘appearances’, but rather the ‘appearing’ of value in itself. Phenomenal forms are not illusory, but, on the contrary, are the forms in which essence is manifested in its entire complexity. Of course, the forms of apparition simultaneously produce false appearances. They deceive the ordinary consciousness and distort the internal connections. But ideology and false consciousness are not notions that are subsequently added to the ‘reality’ of social relations. They form part of these relations, in the same way as surplus-value. It is a feature of the nature of surplus-value to hide itself in the commodity, to disguise itself in profit, to be confounded with interest, to flirt with the time of circulation; in short, to conceal its origins.

The essence and the phenomenon unite in the third volume, which quite rightly reminds the reader of the Hegelian ‘Wirklichkeit’. Nevertheless, we are dealing with the logic of the ‘Notion’ and not with that of the ‘Essence’. The latter can be found in the third volume of *Capital* (even more so than in the other two volumes), but it is always subjected to that of the Notion. The way in which Marx deals with the famous problem of the transformation of values into prices is, as we will see, the proof of this.

The first section is devoted to the concrete forms of capital: cost and prices of production, wages and profit.

The derived forms of industrial capital (commercial capital, financial capital, and so on) do not just fulfil technical functions necessary for the reproduction of capital (reduction of the circulation time, speeding up the rhythm of production, and such like). They are also – like the price of land and ground rent – particular moments of the social imaginary, which comes to completion in the ‘trinity formula’ (see Chapter Twenty-One).

The contradictions of the capitalist organisation of time are manifested in the capitalist crises of overproduction. The fluctuations of the rate of profit regulate economic history and give it its rhythm. Capital produces its particular contents. It enters into conflict and eventually concludes its peace with them. Thus, what some economists call ‘regulation’ is the mediation between the abstract laws of

capital and their particular historical manifestation. Capital does not conform to a historical reality external to it, but rather to a reality that is one of its aspects. In this way, the totality of the determinations, which is capital, is both complete and open. It is a process. The particular historical moments that follow each other, located within this totality, owe their intelligibility to it.

Section One

Surplus-Value, Profit and Time

Chapter Seventeen

Cost, Wage, Profit and Illusions of Time

Marx calls 'production cost' or 'cost of the commodity' (k) that part of value that is spent in the production process and is incorporated in the commodity. This cost includes, therefore, the consumed part of the constant capital (c) and the consumed variable capital (v), or the consumed fixed and circulating capital. The value of the commodity (V) is, therefore, necessarily greater than its cost, for the cost does not include the surplus-value: $k = c + v = V - s$.

The category of cost is first of all a practical notion enabling the distinction between profit and expenses. It expresses the need capital has to always purchase anew the necessary elements for its own reproduction. It is also used for distinguishing between the consumed elements of capital and the ones it has advanced.

However, in this category, constant capital and variable capital do not appear in their specific particularity, that is, on the basis of the role they play in the valorisation of value. Cost, such as it appears in the consciousness of economic agents, is the advanced capital expended without any further specification or internal differentiation. Thus, past and current labour, identified in the category of cost, seem to act in a uniform way on the process of value creation. Profit, or the excess of the sale price of a commodity over its cost, which is realised when the produced commodity is sold, seems to come from the total capital expended and not from its variable part. Since both constant capital and variable capital are uniform parts of the category of cost, surplus-value seems to indifferently come from both the constant part of capital and its variable part.

The mystification does not consist in the fact that it is capital and not labour that possesses the capacity of producing offspring, for it is as capital that labour is value that produces value. As Marx puts it, 'the worker, in the situation of capitalist production, is himself an ingredient of the functioning productive capital'.¹ The mystification consists in the fact that the difference between variable and constant capital disappears in the mode of calculation:

'Because no distinction between constant and variable capital can be recognized in the apparent formation of the cost price, the origin of the change in value that occurs in the course of the production is shifted from the variable capital to the capital as a whole'.²

It is ordinary to note that this false appearance is neither the result of the way the cost of production is calculated as such, nor even of the personal interest that every businessman has in concealing the terms in which value is created. It has much deeper roots that have to do with the intimate articulation of the time of production with the time of circulation. Marx puts this very clearly:

The circulation process is affected by the circulation time as well as by the working time, the time of circulation restricting the surplus-value that can be realized in a certain period. . . . Both these processes, the immediate process of production and the circulation process, constantly run into one another and intertwine, and in this way their distinguishing features are continuously blurred. In the circulation process, as we have already shown, the production of surplus-value, and of value in general, assumes new characteristics. Capital runs through the cycle of its transformations, and finally it steps as it were from its inner organic life into its external relations, relations where it is not capital and labour that confront one another, but on the one hand capital and capital, and on the other hand individuals as simple buyers and sellers once again. Circulation time and working time cut across each other's paths, and both appear to determine surplus-value in the same way. The original form in which capital and wage-labour confront one another is disguised by the intervention of relations that seem to be independent of this; surplus-value itself does not appear as having been produced by the appropriation of labour-time, but as the excess of the sale price of commodities over their cost price.³

The production cost, as a form of consciousness, is a mystification. But it is a necessary mystification, essential to and inherent in the capitalist mode of production.

1. Marx 1981a, p. 118.

2. Marx 1981a, p. 127.

3. Marx 1981a, pp. 134–5.

The difference between the sale price of the commodity and its production cost is nothing other than what Marx calls 'profit'. The latter is, therefore, merely the altered form of surplus-value. It is a form in which essence makes its appearance, the surplus labour time in the form of monetary income, and at the same time a mystified form, namely, the offspring of total capital and not its variable part. As a result, profit is a more complex notion and one that is closer to concrete reality. It is, therefore, richer than the notion of surplus-value: in its reflected form, it is both the transformed form of surplus-value and the expression or the moment of an indispensable illusion. It is a phenomenal form and an essential appearance at the same time, every bit as much as wages.

Wages – or that part of the production cost that is expended for the purchase of labour-power – and profit have this in common: they appear to the ordinary mind for what they are not in reality. Since profit, as a form of consciousness, appears as a saving realised on the production cost (a saving that can equally result from the cheap purchase of labour-power or raw materials and machines), wages are then supposed to be the purchasing price of labour and not labour-power.

Let us remark in passing that the expression 'price of labour' or 'value of labour' is, according to Marx, logically indefensible and absurd. Labour cannot have any value because it is value. 'Labour' exists either in a reified form – in which case it is a commodity or constant capital – or in a liquid form – in which case it functions as variable capital – or in a potential form – in which case it is labour-power. The worker is what he is precisely because it is impossible for him to sell 'his' labour. He cannot sell his labour as a commodity, for, separated as he is from his means of production, he cannot give to his labour a form that is independent from himself. The activity carried out by the worker in the productive unit does not belong to him. Otherwise, it would be impossible to define the role of the capitalist. We are, therefore, left with the third possibility, namely, that the worker can only sell his labour-power. As a result, only labour-power can have a value and a price.

Nevertheless, the 'price of labour', the wage, is not a meaningless category. It designates an essential moment of the social imaginary, a foundational aspect of capitalist legitimacy.

The part of the day that corresponds to the wage does not declare what it is. Moreover, which part of the day can be said to correspond to the wage? The first, or rather the last, four hours? The commodities produced in the morning, or rather those produced in the afternoon? Since socially necessary labour time, in its technological definition, is merely an average arrived at through the disputes concerning working conditions, and since the intensity of daily labour generally decreases, the commodity worth an hour's labour is not the commodity that

has been produced in the course of a real hour. The working day is a whole divided into necessary and surplus labour, but the surplus labour cannot be distinguished from the necessary labour, neither in time nor in space. This visible non-division of the working time into its constitutive elements manifests itself in the wage-form as the 'price of labour', a form that 'extinguishes every trace of the division of the working day into necessary labour and surplus labour, into paid labour and unpaid labour. All labour appears as paid labour'.⁴

Therefore, it is not surprising that the exchange of 'labour' for money appears in law and public opinion as the exchange of equivalents:

The exchange between capital and labour at first presents itself to our perceptions in exactly the same way as the sale and purchase of all other commodities. The buyer gives a certain sum of money, the seller an article which is something other than money. The legal mind recognizes here at most a material difference, expressed in the legally equivalent formulae: '*Do ut des, do ut facias, facio ut des, facio ut facias*' ('I give, that you may give; I give, that you may do; I do, that you may give; I do, that you may do').⁵

It is, *inter alia*, because the phenomenal forms of our societies convert false appearances into real illusions – illusions that are constitutive of an essential dimension of concrete reality – that the 'economic base' and 'politico-juridical superstructure' cannot be seen as two notions whose relations are purely external.

This non-distinction between the necessary labour time and surplus labour, although not a specific characteristic of capitalist society, appears in the latter in a particular way. In the slave system, necessary labour is also indistinguishable from surplus labour. Here, it is necessary labour that seems to belong to the master, as does surplus labour,⁶ whereas in modern society it is surplus labour that appears as necessary labour. 'Under the *corvée* system', on the other hand, 'it is different. There the labour of the serf for himself, and his compulsory labour for the lord of the land, are demarcated very clearly both in space and time'.⁷

4. Marx 1976a, p. 680.

5. Marx 1976a, p. 681.

6. To the extent that the slave is, for the master, a permanent object of production, necessary labour does not belong to the master in the same way as surplus labour. From another point of view, nothing can belong to the slave, for the simple reason that the slave does not belong to himself. He lacks, as Hegel puts it, the recognition of his personality, and, as a result, his 'self' is his master; see Hegel 1991b, pp. 240–1; Hegel, 1970e, p. 312. In this connection, it is interesting to note that Hegel distinguishes the wage labourer from the slave by means of the quantitative difference of alienated labour time. The former alienates a part of his productive time, whereas the latter alienates this time in its totality; see Hegel 1991a, p. 97; Hegel 1970d, pp. 144–5. Marx cites and adopts the corresponding passage from the previous passage; see Marx 1976a, pp. 271–2, n. 3.

7. Marx 1976a, p. 680.

If the wage is the 'price of labour', profit can only have its source in the process of circulation. The act of selling not only realises profit; it produces profit. And, conversely, since selling produces profit, there is no reason for the wage not to be the price or the value of labour. 'Because the price of labour-power appears at one pole in the transformed form of wages, surplus-value appears at the other pole in the transformed form of profit'.⁸

Profit is quantitatively identical to surplus-value, of which it is a modified form. This is not the case with the rate of profit and the rate of surplus-value. The latter is the relation between the surplus labour time and necessary labour. The former is the relation between the surplus-value or surplus labour time and the total capital advanced, constant and variable. With a constant rate of exploitation, the rate of profit can, therefore, move in both directions.

This is a new source of illusions, for with a constant rate of surplus-value, that is to say, the duration, intensity and value of labour-power remaining constant, any saving in constant capital translates into an increase in the rate of profit and seems to be at the origin of the production of additional value.

In addition to saving in constant capital stemming from economies of scale and the division of labour within the productive unit already examined, saving in constant capital can stem from an increase in labour productivity in the productive sectors producing constant capital. For example, the production of more machines during the same amount of time means proportionately reducing the unit value of machines. The productive units that consume these machines experience an increase in their rate of profit, for the same use-value costs them less.

The increase in labour productivity can only result from the progress of social labour, including scientific labour. However, for the single productive unit, the progress of social labour appears as a progress of capital, a progress that is independent of labour, as much to the eyes of the capitalist as to those of his workers. This stems from the fact that the progress of social labour in the productive unit consuming the machine is merely the consequence of the technical progress in the productive unit producing the machine. And since each capitalist depends on the productivity of the others, and depends on their purchasing power, the rate of profit appears to constitute a variable that is independent of surplus-value. The interpenetration of social labours – and the savings resulting from this – through the process of circulation, the latter being the exclusive business of the capitalist, seems to be a totally alien phenomenon to the worker. Once more, the circulation time throws its shadow on that of valorisation.

Without exploitation, there is no profit. Without a rate of surplus-value, there is no rate of profit. This does not just prevent but also implies that the rate of

8. Marx 1981a, p. 127.

profit appears in the surface of society as a variable that has nothing to do with the rate of exploitation and is independent from it.

Since the motive of capitalist production is the realisation of profit, saving in constant capital is inherent to it. Compared with bureaucratically planned economies (characterised more by waste than savings in means of production),⁹ capital realises important savings.

However, capital is only comparatively a relation that results in savings in means of production. The rational and economical character of capital corresponds more to the 'semblance of the matter', for capital throws the worker 'in the state of complete indifference, externality and alienation . . . vis-à-vis the conditions of realization of his own labour'.¹⁰ This factor contributes to the waste of means of production. The current crisis – understood as the result of the crisis of the Fordist organisation of labour in which the indifference vis-à-vis labour took the form of absenteeism, very high turnover of personnel and direct sabotage – confirms Marx's position.

In the same way that wages, cost, and profit, are not purely 'statistical' categories in Marx, indifference and alienation are not purely 'psychological' categories either.

Moreover, since capitalism in general is driven by the sole aim of individual profit, it is characterised by enormous waste of human energy and natural resources. Ecological recycling, for example, is not always economical in the meaning of *wirtschaftlich*, but who would doubt that it is *oikonomiko* in the ancient meaning of this word? And, then, what can one say of the enormous overproduction of commodities (at the same time that humanity cannot satisfy

9. This is what emerges from various analyses devoted to these economies; see especially Chavance 1988, Roland 1989, or Mandel 1991. It is surprising that an author such as Chavance, whose concrete analysis is remarkable, uses Marxist concepts (such as exchange-value and capital) in order to analyse Soviet reality. These concepts are wholly alien to the reality of centrally planned economies, since they imply the absence of planning as the dominant social logic. Such concepts cannot be used for all situations, without completely negating their original meaning. If the Soviet system can only be distinguished from 'monopolist regulation' – the former being characterised by shortages in people and goods, with an overproduction of power, while the latter denotes the overproduction of commodities and unemployment and the profit logic – through its form, one is left wondering what can be the use of essential differentiations. In reality, we are not so much interested here in the analysis of societies of the Soviet type as such, but rather in the interpretation of *Capital*. Contesting the validity of such concepts in relation to Soviet reality is not at all an ideological attempt to legitimise the Soviet-type bureaucrat. These concepts are also not valid for describing slave societies, which can hardly be suspected of having ideological friends. 'Value', 'capital', 'commodity' – so much has been said of these notions that one has the feeling that their wealth has been exhausted. However, their interpretations still remain very different.

10. Marx 1981a, p. 178.

its most elementary needs), advertising,¹¹ 'savings' in constant capital at the expense of the health and safety of workers, or absurd arms spending?

One can only be deeply surprised to find signs of ecological thinking in Marx, an author who, already a century and a half ago, blamed capitalist production for environmental pollution and the lack of ecological recycling.¹² More than a century had to elapse for such ideas to reappear, incrementally and timidly on the political stage.

11. Let us give an example. Five billion deutschemarks are spent every year in advertising for the pharmaceutical industry in the Federal Republic of Germany. Five extra billion are spent for medication of 'contested efficiency'. The multiplication of 'new' drugs does not correspond to the multiplication of therapeutic substances. In 1989, 1,108 'new' drugs were authorised of which only 159 were medically – and not only commercially – new. This almost nullifies the capacity of doctors (they are saying this themselves) to control the efficacy of prescribed medication, and enhances the dependence of the doctors on commercial advertising. Those wanting to access more information on this issue can refer to Neumann's 1990 article, 'Den Ärzten wird's zuviel', which deals with the 1990 conference of the doctors of Würzburg.

12. For an example, see Marx 1981a, pp. 191–5.

Chapter Eighteen

Value and Production Prices (A Logical Interpretation)

The transformation of values into production prices, a subject to which Marx devoted fewer than twenty pages, is generally considered to be the Achilles' heel of the Marxist theory of value. Economists – Marxists and non-Marxists alike – have especially focused on the mathematical aspect of the problem. Marx himself could only have used the mathematical apparatus of his time, and this led him to introduce certain simplifying hypotheses into his analysis. Is Marx's analysis valid without these hypotheses? The coherence and rigour of Marx's analysis have been criticised using more or less relevant arguments. At the end of the 1970s and in the early 1980s, some economists showed that, even without Marx's simplifications, the transformation of values into prices of production is, mathematically, perfectly 'defensible'. We are referring especially to Duménil and Lipietz.¹

It is about time we change the way we think about the transformation problem, and move on from its mathematical and technical aspects to its logical meaning. To avoid any misunderstanding let us highlight that we do not think that the mathematical discussion is secondary. Marx himself was not satisfied with his mathematical formulations. Undoubtedly, he left unfinished algebraic work that needed to be completed, if only for the sake of the beauty of the presentation and the love of rigour (mathematical rigour, in

1. See Duménil 1980 and Lipietz 1985.

this case). This algebraic work, however, has taken on an importance that is patently greater than the nature of the problem in need of resolution. As Lipietz has remarked, the transformation problem has not only been used by some theoreticians who analyse 'economies without production, with two goods and a continuum of agents', in order to attack the validity of the law of value and Marxist rigour in general. It has also been 'the Achilles's heel of the attacks directed at, including from within the labour movement, and as early as in the last century, the whole of Marxism'.²

Our interpretation of the transformation problem is not an alternative to the mathematical solutions, but is rather complementary to them. We will first present the problem as Marx outlines it, and indicate the key ideas that form the basis of the interesting mathematical solutions. Then, we will attempt to formulate a new interpretation.

18.1 Marx and the transformation of values into prices of production

We know the formula for the valorisation of capital $Prof = s/Tturn (c + v)$ or:

$$Prof = \frac{s/v}{Tturn (c/v + 1)}$$

This formula shows that the greater the rate of exploitation (s/v), the shorter the average turnover time ($Tturn$), while the lower the c/v relation, the greater the rate of valorisation, which here becomes the rate of profit.

Marx notes that in a system characterised by the freedom of capital and labour to move from one branch to another, it is perfectly logical and necessary to assume that the rates of exploitation and the rates of profit of different branches will tend to equalise.

It can be assumed from the above, as a speculative assumption, that the profit and the rate of exploitation of each individual capital can be considered as equal. This equalisation is obviously never complete. For in this case, the capitalist system would be in perfect equilibrium and capital would not move from one productive branch to another. In other words, an economy in the ideal state of equilibrium would imply a single rate of profit and a single rate of exploitation for all capitals. Consequently, commodities cannot be sold at (or around) their value because of the organic composition of capital, which is different: 'If a capital whose percentage composition is $90_c + 10_v$, were to produce just as much surplus-value or profit, at the same level of exploitation of labour, as a capital of

2. Lipietz 1983, p. 54.

$10_c + 90_v$, it would be as clear as day that surplus-value and hence value in general had a completely different source from labour, and in this way any rational basis for political economy would fall away'.³

On closer inspection, the relation c/v in our formula is not the expression of the organic composition of capital, but rather that of the relation of the constant capital annually consumed to the variable capital annually consumed. If, for the sake of simplification, the turnover time is temporarily set aside, that is, if it is considered to be equal for all capitals, the relation c/v can be considered as the organic composition of capital. It would be enough, then, to put Marx's numbers in our formula to see that, if a rate of exploitation and a rate of profit that are the same for all capitals are to be respected, it is impossible to claim at the same time that commodities are sold at their values. Therefore, we are facing a paradox, a contradiction. The law of value no longer seems to explain anything. Of course, value in general is only quantifiable through the after-effect of a difference that appears within it, but, moreover, the labour of one branch ideally no longer has the same value as the labour of another, for the movement that distributes the social labour time leads to an ideal equilibrium between the various productive branches that no longer (apparently) has any relation with the quanta of labour expended in each branch.

The transformation problem has drawn the attention of critiques because the latter have taken it to be a solution of necessity, a stain on the beauty of the analysis, a contradiction. The 'commensurability' of the first chapter seems to have lost all of its explanatory power.

Some economists before Marx, more or less conscious of this paradox, tended to privilege the foundation to the detriment of the phenomena, or the phenomena to the detriment of the foundation. Thus, Adam Smith, for example, although he considered the labour-value as a theory that was valid only for the 'shapeless' state of society, namely, for primitive social formations, builds his entire theory of modern incomes on the labour-value. David Ricardo, who was more conscious of the paradox than Smith, quite explicitly sacrifices the phenomena in favour of the foundation, whereas Thomas Malthus and Robert Torrens prefer to sacrifice the foundation in favour of the phenomena. All of them, thus, empty the contradiction, which is, however, quite real.⁴

The transformation of values into production prices, such as Marx outlines it, constitutes an attempt to reconcile appearance with essence, the phenomenon with the foundation. However, it is an attempt based on a logic that is superior to that of reflection.

3. Marx 1981a, p. 248.

4. See Marx 1972, pp. 14–15, 69–70, 81–5, 171–2, 194, 564–5.

Fausto⁵ – whose philosophical analysis of the transformation problem is among the rare analyses of this kind to ‘hold together’ – notes that Marx is not attempting to evacuate the contradiction, but instead aims to fully accept it,⁶ to work from within it in order to evacuate the antinomies of classical economics, thus adopting the same attitude as Hegel vis-à-vis the antinomies of ‘classical’ philosophy.

Marx simplifies his thought by presenting a model with five capitals of an initially equal value, invested in different productive branches. These capitals have the same rate of surplus-value (s/v), but a different organic composition (c/v). As a result, each capital produces a different mass of surplus-value on a decreasing scale. Since the starting-point is the assumption of an average rate of profit, each capital should add to its production cost not the surplus-value produced by itself, but the average rate of profit, so that the total mass of surplus-value is equal to the total sum of profits, and the sum of values is equal to the sum of prices. The idea is, therefore, very simple: the capitalists ‘divide between themselves’ the mass of surplus-value that collectively they had their workers produce. The prices resulting from this (production cost and average profit) are given the name of ‘production prices’. In this way, the law of value is both negated and conserved, or, if we prefer, it is distorted in order to realise itself.

In order to simplify his analysis, Marx assumes that both the variable capital and the constant capital are bought at their values and not at their production prices. His balancing out only concerns surplus-value, whereas the constant capital and the variable capital should logically be bought at their production prices too. Marx recognises this, but cannot do away with the simplification previously introduced for want of sufficient algebraic knowledge. He considers that the logical coherence of his analysis is guaranteed, with or without this simplifying assumption.

With the development of algebraic knowledge, it was considered possible to do away with this simplification and to have the means of production bought at their production prices. But the mathematical formalisation, like any formalisation, requires a well-defined conceptual framework. If, for example, the value of labour-power is defined as the sum of the values of the uses of wages, then the surplus-value is not a quantity of money in the form of income, but the sum of the values of the uses of profit. If, on the other hand, the value of labour-power is defined as the sum of wages corresponding to a quantity of hours of labour

5. See Fausto 1986, pp. 136–58.

6. This is something that Böhm-Bawerk cannot grasp. He discovers with deep surprise that the ‘master himself’ (Marx) explicitly admits the contradiction(!): ‘I am puzzled – he writes – I cannot see any sign of an explanation... but contradiction pure and simple’. He considers this contradiction to be a sort of ‘scientific suicide’ for Marx because no logically thinking person would admit such an absurdity; Böhm-Bawerk 1968, p. 344.

according to a given numerator (an hour of labour = one franc, for example), then surplus-value has to be defined – respecting the same principle – as the sum of monetary profits. Not respecting this conceptual framework leads to the paradox of the Morishima type. Morishima, by choosing a numerator so that the sum of values is equal to the sum of prices, believes that he arrives at a result where the respect of the above condition excludes the equality between the sum of profits and the sum of surplus-values, the former being greater than the latter. But in this ‘paradox’, there is nothing paradoxical:

Suppose then that, in our Morishima-type solution, the sum of profits is greater than the sum of surplus-values. But suppose then that with these profits, [the capitalists] purchase commodities whose prices (for this numerator) are systematically higher than their values. Is it possible that the value of these uses of their profits is equal to the social surplus-value? Well, that is precisely the case!⁷

And this assertion is not without foundations because Lipietz proves it algebraically in his book *The Enchanted World*.⁸

18.2 The transformation as a syllogism

Beyond any mathematical problematic, the transformation of values into production prices raises a series of logical problems that debates and commentary have yet to exhaust. These problems are linked to the question of ‘labour productivity’, ‘commensurability’, the relation between ‘concrete labour’ and ‘abstract labour’, ‘capital’ and ‘simple exchange value’. The third volume of *Capital* is incomplete in two ways: first, the material that Marx intended to deal with has not been exhausted; second, the material dealt with has not been sufficiently developed. Several questions have remained unresolved, even if many critiques and commentaries have ignored them.

Let us begin with the notion of the productivity of labour. The other notions will flow from it:

By ‘productivity’ of course, we always mean the productivity of concrete useful labour; in reality this determines only the degree of effectiveness of productive

7. Lipietz 1983, p. 74.

8. There is no need to deal any more with the problem by going over the apparent sources of paradoxes and their solutions. We have devoted a few lines to the Morishima paradox in order to show that Marx can be well defended in modern mathematics, on condition, of course, that his conceptual framework is respected. Those interested in the mathematical formulations concerning the subject under discussion can refer to the works already cited.

activity directed towards a given purpose within a given period of time. Useful labour becomes, therefore, a more or less abundant source of products in direct proportion as its productivity rises or falls. As against this, however, variations in productivity have no impact whatever on the labour itself represented in value. As productivity is an attribute of labour in its concrete useful form, it naturally ceases to have any bearing on that labour as soon as we abstract from its concrete useful form. The same labour, therefore, performed for the same length of time, always yields the same amount of value, independently of any variations in productivity.⁹

The productivity of labour appears in this passage (taken from the first chapter of the first volume of *Capital*) as a property of concrete and useful labour. Abstract labour is purely and simply what remains when 'one' sets aside concrete labour, a 'quantum' of time whose quality consists in the fact that it has no quality. The 'one' above is not Marx, but rather the exchange relation or the negation of the commodity in money. The productivity of concrete labours is not commensurable, for the productive power of labour only indirectly concerns abstract labour. For example, this means that labour in branch x cannot be considered more or less productive than labour in branch y, since they lack that 'something in common'. Consequently, any rise or reduction in the productivity of labour in a given industrial branch influences the quantity of the commodities produced and exchanged, but not the quantity of money that they return.

In Chapter Nine of Volume III of *Capital*, concerning the transformation of values into production prices, Marx provides another definition of labour productivity that is radically different:

The specific degree of development of the social productivity of labour differs from one particular sphere of production to another, being higher or lower according to the quantity of means of production set in motion by a certain specific amount of labour, and thus by a specific number of workers once the working day is given. Hence its degree of development depends on how small a quantity of labour is required for a certain quantity of means of production. We therefore call capitals that contain a greater percentage of constant capital than the social average, and thus a lesser percentage of variable capital, capitals of *higher* composition. Conversely, those marked by a relatively smaller share of constant capital, and a relatively greater share of variable, we call capitals of *lower* composition. By capitals of average composition, finally, we mean those whose composition coincides with that of the average social capital.¹⁰

9. Marx 1976a, p. 137.

10. Marx 1981a, pp. 263–4.

The productivity of labour in the various productive branches is now comparable and commensurable. This commensurability results, in reality, from the composition of capital. Of course, one can consider that what we have here is an additional 'oscillation' (as Castoriadis would put it) by Marx, not stemming from any necessity. The definition of productivity from the first chapter, however, fits in the conceptual framework of the satisfaction of human needs, whereas the second definition fits in that of the 'satisfaction' of capital. This means that variable capital is 'replaced' by constant capital, or grows at a slower pace than the latter, notably because of distribution conflicts between the social classes and the competition between capitals, with the sole aim of the valorisation of value. The valorisation of value has no direct relation to the satisfaction of human needs. It is, therefore, capital that defines productivity in a different way and also modifies the relation between concrete and abstract labour, and value and use-value.

In the first chapter of *Capital*, the relation between value and use-value was a relatively external relation. The commodity is, from one point of view, value, and, from another point of view, use-value (without having the capacity of being the one without being the other, obviously); for the one exchange-value, for the other use-value. Concrete labour was not in itself abstract or subjected to the logic of abstract labour.

Once simple circulation is abandoned and the circulation of capital is examined, things appear to be different. Capital is value that is being valorised. Therefore, it is a process. This process is constantly the unity of value and use-value, and there is no longer any external relation between them. Value is divided within itself into value and use-value. Value as a universality is the simple relation with oneself, an undifferentiated unity in itself. As a particularity, it is value and use-value. Use-value is a determination of value or capital in that it constitutes its particularisation, a passing moment without any real meaning 'next to' or 'beyond' value. Use-value is no longer simply one of the aspects of the commodity, but is rather an aspect of value. When dealing with a teleological relation, the means is not external to the end, but a particular moment of the latter. If we adopted this approach – the only one, incidentally, that conforms to Marx's spirit – we would understand far better capital's 'technologies' that are far from being 'neutral', as well as the historical evolutions of concrete labour. Abstract labour, in the course of its evolution, has with all the powers of science and experience transformed concrete and individual labour into one of its predicates. It has turned individual labour into abstract/concrete labour at the level of 'real life', thus subjecting 'experience' [*Empirie*] to the rigour of the Notion.

We know that Marx defines the composition of capital in a three-fold way. Technical composition is the quantitative relation of means of production to labour-power, the 'material' ratio between the former and the latter. Value-composition

is the relation c/v in value terms. Finally, Marx writes that ‘there is a close correlation between the two. To express this, I call the value-composition of capital, in so far as it is determined by its technical composition and mirrors the changes in the latter, the organic composition of capital’.¹¹ The term ‘organic composition’ is generally used since, despite being a relation between values, it is the moment of unity between value and use-value. In general, when Marx speaks of the ‘composition of capital’, he refers to the organic composition.

In his *Critique of Labour*, Jean-Marie Vincent writes the following about the notion of abstract labour. The critique of this passage will enable us to move on:

The latter [abstract labour] is not, as many believe, a social average, but, to use Marx’s terminology, a real abstraction, the fruit of a series of social operations that transform the concrete labour of individuals into interchangeable activities, partly individually expended, of an abstract social labour distributed between the various branches of production according to the laws of the market and the realisation of surplus-value. . . . As Marx notes in *Capital*, capitalist production appears more and more as the work of a huge social automaton imposing its dynamic on individuals, not to say that it subjects them to the laws of a real societal mechanisation.¹²

In the above, there are several ideas about abstract labour that seem to us perfectly correct. Of course, abstract labour is not a ‘social average’, but much more a ‘societal mechanisation’. However, when Vincent claims that abstract labour is not a ‘social average’ but is distributed among the various branches of production according to the ‘laws of the market’ and the ‘realisation of surplus-value’, this does not tell us what kind of connections exist between the quantitative determinations of abstract labour and the laws of the market.¹³ But the realisation of surplus-value, such as it appears in the transformation of values into production prices, aims at delineating these connections.

Marx introduces us to a system in which production prices, being the monetary expression of particular commodities, are connected with each other and with value – the production prices of capitals with an average composition are identical to their values – through the mediation of the particular productivity of labour.

11. Marx 1976a, p. 762.

12. Vincent 1987, p. 31.

13. What is the exact relation between abstract labour and the laws of the market? The scholarly *Critique* of this author, set out in philosophical terms, does not deal explicitly with this type of question, but implicitly raises them and invites the economist to provide answers to them.

Each production price constitutes in this system a relative gravitation centre around which market prices oscillate. In practice, this means that the labour of the one is not worth, on the market, the labour of the other. Of course, the transformation of the commodity into money is reductive: in money, the particularities of the commodity disappear, and all that remains in it is what was universal from the very beginning. However, it so happens that commodities are not exchanged according to the abstract labour they 'contain'. The question, therefore, arises as to why the labour time of the ones is socially punished and the labour time of the others, on the contrary, is overestimated, that is, why production prices or relative centres, around which prices oscillate, are created. In other words, why does exchanger x freely give 10 hours of labour in order to receive seven? We are forced to admit that use-values must have something to do with this.

But we should be careful, for this 'flirt' with neo-classical economics is not real. It is true that production prices, social recognition of concrete/abstract labours, seem at first to enjoy an 'excessive' autonomy, and threaten to deprive economics of any rational basis (indeed, it is Marx who says so). One could say that despite 'utility' having been kicked out the door, it is returning through the window. Nonetheless, the supply and demand relation, without which there is no 'utility' or 'scarcity', does not at this point explain anything more than it explained at the beginning, namely, nothing. The mind is, therefore, forced either to admit defeat or to look in the 'objectivity' of the economy for its own laws. It is precisely in this way that Marx poses the problem in the passage cited above (at the beginning of this chapter). The economic world can only appear as structured and orderly if one knows what one is looking for in it. We sought a syllogism, and we found it.

Since a syllogism is based on the dialectic of the universal, the particular, and the singular, it is necessary to identify to what these moments correspond. Social value is the universal of the syllogism, for it is distributed among all the specific commodities and, thus, it is everywhere present... like the genus is in the case of individuals. The 'individuals' or the singulars are the production prices that are distinguished from one another, not necessarily through being higher or lower, but by virtue of their particularity, which is the productivity or organic composition of capitals.

If the commodity of the one is worth – on the market – the commodity of the other, (relatively) independently of the labour time socially necessary for their production, if the labour time of the one can be considered as more 'creative' than that of the other, this is solely because these labours are connected with one another through the particular and specific productivity or the organic composition of capital.

Production prices constitute, as we have noted, relative centres around which prices oscillate. These are relative centres, since production prices themselves oscillate around a universal centre, namely, value. Let us identify, for the moment, this universal centre, for the sake of simplification, with the commodities produced by capitals of an average composition and sold at around their values.

The equality of capitals, which is also expressed 'as a tendency with iron necessity', produces the average profit and the social rate of exploitation, imposing in this way the simple exchange of non-equivalents in terms of values. It, therefore, makes sense that a production price, examined in isolation from the others, does not seem to obey any law, and it is impossible to explain why it is expressed by one monetary number and not by another. Around a planet (production price) oscillate satellites (market prices), but it is absolutely impossible to logically grasp the movement of a planet by taking it and its satellites as the starting-point. As such, it is impossible to understand, without any mediation, why such a commodity is worth more than another on the market. The sun must, therefore, be brought in, an absolute centre of gravitation around which the planets move. We would say, therefore, that the singular in our syllogism, or the production price, is united with the universal or value by means of its particularity, that is to say, by means of the specific composition of capital, which is at the same time what separates and unites the relative and the absolute centre, what holds them at a distance without destroying their relation. This syllogism is of the S-P-U type.

The moment of the syllogism's particularity can be considered as a specific law in the sense that, with a higher composition of capital, the labour time incorporated in the commodity will be proportionally more 'creative' and its market value will be higher than its real duration. This specific law cannot be valid 'in isolation' either. The commodities must be sold at around their production prices. Moreover, historically this has not always been the case, according to Marx. The singular or the production price, which in effect constitutes a relative centre of gravitation, is the moment that mediates the specific law, the particularity, with the universal centre (U-S-P). If the commodities were sold at around their values, then the organic composition, as a specific law and particularity enabling the distinction between the singulars, would disappear with them. The formal equality between the products of labour would be established at the level of simple circulation, but only to the detriment of the equality of capitals.

Finally, value is the middle-term that mediates the organic composition, productivity, with production prices (P-U-S). It enables the elimination of chaos and the conceptualisation of the economic world as a totality governed by laws, a structured and orderly whole, such as it is 'in itself' and for the mind. Total socially necessary abstract labour is divided within itself into concrete and

particular labour, according to the productivity of each branch. It is specified in particular branches and productivities. It communicates its power to the singulars by granting them a relative autonomy, in order to be conserved and reproduced as the identity of the identity (abstract labour) and the non-identity (concrete labour), that is, as a subject.

We have assimilated the universal centre to the commodities exchanged at their values for the simplicity of the syllogistic 'image'. It is obvious that at the logical level it is of little importance whether there are effectively commodities whose production prices coincide with their values. It is possible that no fraction of social capital possesses the average composition, and that the latter is situated outside each individual capital. The three-fold syllogism developed here is that of social value as a universal law of the capitalist economy. It is the syllogism of the abstract principle that regulates the capitalist organisation of time and the particular commodity to the extent that the particular commodity has a production price deriving from the relation between the specific law and the universal law. It is the syllogism of the abstract principle of the productivity of labour to the extent that labour productivity constitutes a 'specification' of the value of productive capital, its division into past labour and current labour or its organic composition. No capital situated outside this three-fold syllogism – for example, a capital that does not tend to realise the average profit, or that is not attached to any relative or universal centre – can exist, that is, it cannot exist for the mind, since it is not the product of any necessity.

The organic composition could obviously be replaced by the turnover time of capital that we have set aside. If – as a speculative hypothesis – the relation c/v of the formula of the rate of profit was assumed to be equal for all capitals, and only the turnover time to be different for each capital, the same result would arise. Instead of the relation c/v being the particularity in the syllogism, this particularity would be the turnover time T_{turn} . In reality, the 'particular' is the combined interaction between the relation c/v and T_{turn} , or, mathematically, the denominator of the formula for the rate of profit: $T_{turn} (c/v + 1)$. This is a particularity of every capital, for every capital is supposed to have the same rate of profit and the same rate of exploitation. At a closer look, this particularity designates the way in which each individual capital is quantitatively and simultaneously part of the cyclical time (T_{turn}) and the linear time (c/v , past labour/current labour).

Let us note in passing that, if we spoke of the sun, planets and satellites, it is because we have no intention of concealing the fact that the syllogisms presented here are inspired from the passages in Hegel's work that deal with the cosmological system (of which they constitute a rather strict application, despite

certain differences), and which can be found in the *Science of Logic* and the *Encyclopaedia Logic*.¹⁴

We will conclude this chapter by raising some questions. Is the relation between abstract labour at the level of society, including in its quantitative dimension, and the 'laws of the market', not better grasped using this syllogistic system? If commodities are not sold at their values, this is because the market recognises in them another 'value' by a movement of negation (market prices) of the negation. In this sense, Salama is right to note that 'production prices become the application of the law of value at the level of many capitals',¹⁵ even if we prefer to replace 'many' by 'equal'. When Marx examines the 'laws of the market', he does not deny that there exists a certain relation between the price of one kind of commodities and the quantity of this kind of commodities sold. This is obvious and can be empirically observed. The more the unit price is reduced, the more a category of commodities is sold, 'all other things being equal'. However, this last 'magical' expression generally raises more problems than it solves, for it is necessary to know whether things can, in fact, remain equal. Indeed, does the transformation mechanism not show precisely that they cannot remain so? If certain commodities are regularly sold at above their value, this is because others are sold at below theirs, as Marx tells us. Therefore, if in the dynamic movement of economic exchange, a type of commodities – because of an increase in productivity – can be sold at above its value, this means that another type is sold at below its value.

It can, therefore, be assumed that production prices stem from the fact that the produced quantity of these commodities is such that the market recognises in them a greater or smaller value than the value they actually 'contain'. If a given industry can sell its commodities at above their 'individual value', but below the 'average value of the branch', thus realising an 'extra surplus-value', why, *mutatis mutandis*, would the same thing not happen at the inter-branch level too? The question this would raise would, therefore, be that of understanding why certain branches can produce commodities in such a quantity so as to be able to sell them, with a certain level of regularity, at above their value, at the production price, while other branches cannot. The answer is very simple and has already been formulated. It is because capitals do not have the same organic composition or the same average turnover time, in short, because they do not have the same productivity. Thus, the empirical regularities of the market appear for what they are: 'data' that are incomprehensible on their own and whose meaning comes from the totality that they help to create. The transformation

14. Hegel 1989, pp. 721–4, Hegel 1969b, pp. 423–6, and Hegel 1991b, pp. 276–7, Hegel 1970e, p. 355.

15. Salama 1985, pp. 143–55, and 151–2.

of values into production prices is part of the instantaneousness of the acts of exchange and, therefore, the framework of a world without production. Or, more specifically, it is part of a succession of such moments of instantaneousness. It goes without saying that this aspect of reality is not reality itself. It is merely a subordinate moment in the diachronism of value that is being valorised.

Finally, can the shadow of a rational element – to express ourselves clearly and briefly – be ‘rescued’ by putting ‘experience’ [*Empirie*] at its place, an element that is present in the analyses of those who prefer to work ‘without production, with two goods and a continuum of agents’?

Section Two

**The Sub-Divisions of Profit or Fetishism
Completely Realised**

Chapter Nineteen

The Derived Forms of Industrial Capital¹

19.1 Merchant's capital (*Handelskapital*)

Capital in its fundamental form, or industrial capital, is characterised by the parallel development of its three circuits:

- I. $M-C \dots P \dots C'-M'$, or $M \dots P \dots C'$
- II. $P \dots C'-M'-C \dots P$, or $P \dots C'-M$
- III. $C'-M'-C \dots P \dots C'$, or $C'-M' \dots P$

In Marx, commercial capital is one of the forms of capital that is invested solely in the circulation process. Its circuit differs from that of industrial capital. The merchant buys in order to sell at a higher price: $M-C-M'$. That which for the industrialist can be represented as $C'-M'$, is for the merchant $M-C$, and that which for the merchant is $C-M'$, becomes for the industrialist $M-C$.

From the point of view of industrial capital, commercial capital greatly reduces its circulation time because the realisation of the value of industrial capital is accomplished as soon as the merchant has bought its commodities. However, this point of view is that of the industrialist, rather than industrial capital. In reality, we are dealing with a division of the acts $C-M$ and $M-C$ (it is useful to set aside surplus-value for the moment and return to it at a later stage). Industry sells

1. Parts 4, 5 and 6 of the third volume of *Capital* present some important translation difficulties: (a) *Handelskapital* = merchant's capital (not to be confused, from this point onwards, with commodity-capital); (b) *Warenhandlungskapital* = commercial capital; (c) *Geldhandlungskapital* = money-dealing capital (not to be confused with interest-bearing capital); and (d) *Zinstragendes Kapital* = interest-bearing capital, which can also be translated as financial capital.

to the merchant who will resell the same commodity. The merchant buys from industry what industry or the unproductive consumer will buy back.

This division of the acts of circulation, to which corresponds the division of the agents of capitalist reproduction into industrialists and merchants, has no qualitative influence at all on the three circuits of industrial capital. From the point of view of the reproduction of total capital, industrial capital does not go through these circuits, since the industrialist has transformed his commodities into money. Commodity capital has a new owner, but it continues to function as commodity capital that needs to be transformed into money. It continues to find itself in a particular stage of the process of reproduction, in its circulation stage.

The division of the agents of reproduction into industrialists and merchants – although necessary for the expanded reproduction of capital – constitutes an aggravating factor for the crises of overproduction. The limits of the capacities of social consumption make themselves felt on the production process with a temporal lag, since the industrialist realises the value of his commodities and can productively reinvest it before the value of the industrial commodity capital has been definitively realised.

The development of commercial activities and their concentration lead to a real reduction to the circulation time of commodities and, as a result, the turnover time of industrial capital. The value invested in the production process increases because the value in circulation is reduced. The development of trade, and the economies of scale resulting from it, accelerate the process of accumulation, despite the fact that commercial activities are unproductive and produce neither value nor surplus-value.

The merchant provides an unproductive service to the producer, in exchange for which he receives a sum of money corresponding to the sum of value of his “constant capital”, “variable capital” and profit. The labour time necessary for the realisation of the production price of the commodities is inferior to the labour time that the industrialist himself would unproductively spend in the circulation process. Commercial profit, in Marx, comes from the difference between these two times.

The law of the equalisation of the rate of profit is now valid not only for the various productive branches, but also for the various agents of reproduction whether they are mainly occupied in the production process or in that of the circulation of capital.

Nevertheless, it is easy to understand that the turnover time of commercial capital impacts on prices in a different way to that of industrial capital. Commercial capital raises the purchasing price of commodities according to the duration of selling time. The price rise is proportional to its turnover time. Here, the circulation time appears as a factor that determines market value. In reality, and

on the contrary, it is not the extension of the circulation time that enables the increase of the value produced in a given amount of time, but rather, and indirectly, the shortening of circulation time. For industrial capital, the value of a commodity is absolutely independent of circulation time, even if this fact is obscured by the equalisation of the rate of profit and production prices (compensation effects for long circulation and turnover times). For industrial capital, the circulation time is inversely proportional to the value that can be produced in a given amount of time, whereas for commercial capital the price-rise is proportional to the circulation time. In the movement of commercial capital, every sign of the relation between labour time and price disappears. The rate of profit appears to be, if not arbitrary, then solely dependent on the laws of competition, as if these laws could be based on themselves. Speaking of the agents of reproduction of capital, Marx writes the following:

Competition, too, necessarily plays in their minds a completely upside-down role. If the limits of value and surplus-value are given, it is easy to perceive how the competition between capitals transforms values into prices of production and still further into commercial prices, transforming surplus-value into average profit. But without these limits, there is absolutely no way of seeing why competition should reduce the general rate of profit to one limit rather than to another, to 15 per cent instead of 1,500 per cent.²

Furthermore, this means that economic thinking necessitates a space that can be assumed to be qualitatively homogenous and quantitatively limited in order to define the laws that are at the origin of the determination of prices and the level of the average rate of profit. Economic thinking cannot ignore mathematical language, even if it must set limits to it. This space is, in Marx, abstract labour time. With regards to the first chapter of the first volume of *Capital*, the focus is shifted from the question of commensurability – which regulates the exchange relation – to that of the homogeneity of this space. But the laws of ‘geometry’ cannot measure it rigorously, just as exchange-value eludes the laws of algebra. The question we are facing, then, is whether this space can be anything other than socially validated labour. In any case, supply and demand – taken to be two forces acting within simple circulation – can, at the most, bring the rate of profit down to an ordinary level, but they cannot explain why this rate should be at this level rather than another, or why the equilibrium price should be at this level rather than any other.

Money-dealing capital [*Geldhandlungskapital*] is the second form of merchant’s capital. Essentially, this concerns capital invested in the technical operations of

2. Marx 1981a, p. 429.

the monetary form of industrial capital. These operations are carried out by a particular category of agents of circulation. These agents deal with such tasks as payment and collection of payments, account balances, compensation acts, transfers, and such like, and they do so in the place of producers and merchants. They contribute, as merchants do, to the reduction of the circulation time of industrial capital. Even if these tasks are often carried out by banks, money-dealing capital plays a different role from that played by interest-bearing capital. Money-dealing capital contributes, as does commercial capital, to the reduction of the circulation time by undertaking the tasks of circulatory transformation, whereas interest-bearing capital has, as we will see, other functions. This is the reason why money-dealing capital is 'placed' in the category of merchant's capital.

19.2 Interest-bearing capital [Das zinstragende Kapital]

Commercial capital entails a division of the acts of circulation, the acts of purchase and sale. Interest-bearing capital entails a splitting in two of the starting-point and the arrival-point of the circuit of money capital: $M-M-C \dots P \dots C'-M'-M'$. We are in the presence of a specific relation between a lender and a borrower. The former loans his money as capital, while the latter employs it as industrial capital.

From the point of view of the lender, the 'circuit' of his capital is reduced to the movement $M-M'$. The sum advanced returns to his pocket, expanded by a rate of interest. It is enough that time passes for its value to be valorised, and this happens without the slightest mediation. Every difference between value and use-value, universal and particular, seems to disappear. The use-value of the loaned value is consumed in the loan itself, with the latter being a source of the valorisation of the value advanced. The money taken to be a material thing, independent of any social relation, seems to possess the secret property of multiplying. The accumulated claims on social labour are, in themselves, the bearers of eternal and increasing claims on future labour.

This subjective point of view of the lender is reflected in the consciousness of the active capitalist, whether or not he is a borrower. The 'net' profit of the latter's firm is calculated by subtracting the interest from the 'gross' industrial profit. The reasoning is simple. A sum of money yields an interest of x percent. This percentage is supposed to be known. The 'net' profit of the firm is, therefore, the profit exceeding this x percent, since the realisation of the latter would be possible without the mediation of the productive process. In this way, 'net' profit and interest are calculated in a relation – the one on the basis of the other, the one in opposition to the other. The opposition between necessary labour and

surplus-labour disappears, so as to give way to a purely imaginary opposition between 'industrial profit' and 'financial profit'. Money appears here as a sort of mysterious automaton capable of legally auto-reproducing itself on an expanded scale, whereas 'industrial profit' appears as a sort of wage for the labour of the active businessman. Paradoxically, in this imaginary world of deceptive appearances, traces of surplus-value appear: capitalist profit cannot entirely come from the labour of the capitalist, for, in this case, what would be the source of 'financial profit'?

Obviously, interest-bearing capital is not accumulated because it is loaned, but because the borrower employs it as industrial capital. Industrial profit is not multiplied by two because capital, in monetary form, is advanced twice. It is, therefore, clear that industrial profit is first, logically, 'one and indivisible'; then, it is really or ideally distributed between lenders and borrowers, interest and company profit. These two last categories, considered as two parts of surplus-labour, have nothing mysterious about them. They are, like profit, at the same time both phenomenal forms of surplus-value and moments of the social imaginary, or moments of what Marx calls 'fetishism'. But if profit is the phenomenal form of surplus-value, interest and company profit are the subdivisions of profit. The relation of these subdivisions of profit to surplus-labour is not immediate, but rather mediated through industrial profit. This non-immediacy is an additional element creating confusion:

While interest is simply one part of the profit, i.e. the surplus-value, extorted from the worker by the functioning capitalist, it now appears conversely as if interest is the specific fruit of capital, the original thing, while profit, now transformed into the form of profit of enterprise, appears as a mere accessory and trimming added in the reproduction process. The fetish character of capital and the representation of this capital fetish is now complete. In $M - M'$ we have the irrational form of capital, the misrepresentation and objectification of the relations of production, in its highest power: the interest-bearing form, the simple form of capital, in which it is taken as logically anterior to its own reproduction process.³

In order to deal with issues having to do with the level of the rate of interest, we must abandon the subjective viewpoints of the lender and the borrower, the inactive and the active capitalist. Interest is one part of industrial profit, but are there any laws that regulate the quantity of interest? Is there a 'natural rate' of interest? Interest is, by definition, lower than industrial profit, because it is only a fraction of the latter. According to Marx, this is almost all that can be said of the quantity of interest:

3. Marx 1981a, p. 516.

There is no reason at all why the average conditions of competition, of equilibrium between lender and borrower, should give the lender an interest of 3, 4, 5 per cent, etc. on his capital, or alternatively a certain percentage, 20 per cent or 50 per cent, of the gross profit. Where, as here, it is competition as such that decides, the determination is inherently accidental, purely empirical, and only pedantry or fantasy can seek to present this accident as something necessary.⁴

A theory of the rate of interest cannot be developed, since competition alone determines its level. 'Interest-bearing capital' that is not loaned is not capital, but simply money saved. How the rate of interest is determined depends on the momentary balance of forces between industrial and interest-bearing capital. This is all that can be said, and it is not an explanation, but rather a non-explanation of the fluctuations of the rate of interest. Of course, a thousand 'regularities' can be observed in the fluctuations of the rate of interest. They are in a certain way related to bond prices and the profitability of stock exchange 'products', the level of savings, the rate of interest in other countries, economic liquidity, the average rate of profit, the economic cycle, the policy of the central bank, and so forth, but there is more than just a simple step separating the observation and the theorisation.

Let us be permitted here a small digression: in their book *The Violence of Money*, Aglietta and Orléan write the following: 'Throughout his [Marx's] work, a Hegelian conception of the movement of forms confronts a "naturalist" conception of labour'.⁵

This remark is, in itself, absolutely fitting; indeed, Marx 'oscillates' from a 'naturalist' to a 'Hegelian' theory of value. But it is this 'oscillation', this contradictory unity, which gives Marx's work its exceptional power. If the dialectics of forms is abandoned, there can only remain an extremely static and poor vision of capitalist social relations, a vision which – quite paradoxically – both the vulgar and the structuralist readings of *Capital* share. If the 'naturalist' theory is abandoned in favour of the movement of forms, every possible relation between value and price – at the quantitative level, of course – is destroyed. Incidentally, this is what a good connoisseur of Marx and Hegel, namely, Henri Denis, has already done. Denis grasps this oscillation (not to say contradiction) in Marx's work, and devotes two books to it (albeit partially in the second book), namely, *Marx's 'Economics': The History of a Failure*,⁶ and *Hegelian Logic and Economic Systems*.⁷ In the latter, when the discussion comes to prices, Denis argues that we must

4. Marx 1981a, p. 485.

5. Aglietta and Orléan 1984, p. 31.

6. Denis 1980.

7. Denis 1984.

give up seeking a rational explanation for the quantitative dimension of prices: 'If one wants to consider them as a reality in themselves, prices are something perfectly contradictory . . . The only way of dealing with this contradiction is to completely abandon the attempt of identifying the sources or the foundations of prices'.⁸

Could commodities have different prices for purely accidental reasons? Is there not any valid foundation behind prices that differ so much? Few philosophers – even fewer economists and no practical businessman – will follow Denis along this road.

This dialectical vision of exchange value [Hegelian essence, pure negativity, a 'nothing' showing that the use value must be negated for exchange value to conserve and reproduce itself] and prices does not prevent us from recognising that in order to produce labour and land are necessary. But labour and land are reduced to the status of natural conditions of production, as are the air, the heat in the atmosphere, and all the elements that come from nature and are used in the production process.⁹

The 'naturalist' and 'empiricist' vision of labour as value in Marx has been evacuated in order to 'classify', finally, this very same labour in the category of the 'natural preconditions' of all production, alongside the air and heat in the atmosphere; as if labour were not a mode (if not *the* mode) of 'socialisation' of man in every mode of production, including – and all the more so – the capitalist mode.

For our part we prefer, following Marx's example, to combine these two conceptions, for they are not irreconcilable, but on the contrary can be the basis for a rich 'reading' of capitalism. Value is and is not (calculable) labour time, according to chapters two, three and four of the present work. As a conclusion to this digression, let us note that if we attached no importance at all to the expended labour time in the determination of value, we would be in the same deadlock concerning the determination of prices as we are now in relation to the determination of the rate of interest.

Interest-bearing capital participates in the formation of the general rate of profit as a means: it facilitates the movement of industrial capital, in its productive and commercial form, from one economic branch to another. Interest-bearing capital cannot, like industrial capital, 'demand' from the market a rate of profit proportional to its size according to the level of the average momentary rate of profit. Why not? For the simple reason that interest-bearing capital as such cannot move from one branch to another, from one economic domain to another,

8. Denis 1984, p. 143.

9. Ibid.

as industrial capital does in order to realise a higher rate of profit. As soon as it is loaned, it exists in the form of an entry in the books of the lender, and in the form of industrial capital in the hands of the businessman. It is as industrial capital that it is invested in a given domain of productive and commercial activity. In other words, to say that industrial capital moves from the industrial to the financial field makes absolutely no sense, for interest-bearing capital, or financial capital, is what it is as soon as it functions as industrial capital in the hands of the borrower. Interest-bearing capital is not a part of the social capital as a whole. It is not added to the value of industrial capital. Rather, a variable part of industrial capital also exists in the form of credit, or in the form of an entry in the books of financial capitalists, because it exists in the form of debit in the books of industrial capitalists. What increases or decreases is not financial capital as against industrial capital, for these two poles are not opposed in the same way that one field of activity of industrial capital is opposed to another. What can relatively increase or decrease is the part of industrial capital that exists in a dual form (credit/debit). 'Financial investment' and financial profit do not exist, that is to say, they positively exist only from the subjective point of view of the lender, in the same way that they negatively exist only from the subjective point of view of the borrower. This is why Marx maintains that the determination of the rate of interest is purely accidental and fortuitous, or 'empirical'.

Interest-bearing capital is, in a certain way, capital as 'property', as opposed to industrial capital that represents capital as 'function'. This does not mean that the former does not fulfil an essential social function in the capitalist mode of production. The development of the credit system and the banks goes hand in hand with a progressive reduction to the circulation time and, as a result, of turnover time; in this way, it accelerates the rhythm of reproduction and accumulation of capital. In Marx, the banks represent, among other things, a mode of socialisation of small sums of money that are gathered together in the banks and then used by the bankers as loanable capital. The source of the bankers' profit is the difference between the rate of interest they offer their creditors and that which they demand from their debtors. In this way, reserve funds and gradually spent income, deposited in the banks, are reduced at the social level to the bare minimum. This enables the acceleration of monetary circulation. That the banker loans capital that he does not own, or that he loans more than what he has in deposits or in any other form of banking capital, plays no role here at all.

For Marx, the credit system, whatever its form (the purchase of stocks or stock-exchange activity in general are another form of credit), constitutes two things: firstly, a means of simplifying the mode of mobility of industrial capital, the means through which the tendency towards the equalisation of the rate of

profit becomes real and existent; and secondly, a means of reducing purchasing and selling time, or a means of reducing to the bare minimum the social value in circulation.

In short, credit or interest-bearing capital – two inseparable phenomena in the capitalist mode of production – without directly participating in the creation of wealth, by acting as a necessary means for the acceleration of the rhythm of reproduction, indirectly contribute to wealth creation.

Chapter Twenty

Ground Rent

Among Marx's critiques of Hegel's work, some are not entirely clear, while others are debatable. On the contrary, Marx's critique of Hegel's ideas on the private property of land seems to us particularly clear and legitimate. For Hegel, the private ownership of land was more a relation between man and nature than one between men. In Hegel, the private ownership of land is an act of realisation of the individual's will, an act by which the individual materialises his will. Marx criticises this by pointing out that if this is the case, then every man, in order to realise himself, would have to be a land-owner. Moreover, what would be the quantitative limit that the individual would set to the realisation of his will? One hectare, two hectares, or a whole country? Hegel himself raises this question. He persists to seek an answer in 'positive right', since, as he puts it, 'one would no longer be able to deduce anything from the Notion'. The 'Notion' is in a deadlock for good, for it has taken a determined juridical and social form – land ownership – to be an absolute and transhistorical form inherent to the relation between man and nature. This 'Notion' has, almost explicitly, recognised its defeat, for it cannot grasp the real evolution of land ownership.¹

The originality of Marx's approach, in comparison to Hegel's, consists of a reversal of hierarchy. The private ownership of land – and ground rent – is, first of all,

1. Marx 1981a, pp. 752–3.

a relation between men, and then a relation between man and nature. The latter relation stems from the former, and not the other way round. Both relations are hardly absolute or transhistorical.

The private ownership of land expresses a relation whose concrete forms of manifestation develop in parallel to the dominant social relations. Ground rent precedes the capitalist mode of production. In *Capital*, however, Marx only devotes a few pages to its pre-capitalist forms (rent in the form of labour, in kind, in money, and so forth). On the other hand, he considers what he calls 'capitalist ground rent' to be very important.

Pre-capitalist rent did not stem from the ground, but from surplus-labour in an obvious and unquestionable way. For example, when a farmer spends a number of days working on the plots of the landowner for free, no intellectual effort is necessary in understanding that the land is not the tree on which surplus-labour grows, and that the latter is a product not of the earth, but rather of society. Capital – a specific mode of appropriation of surplus-labour – does not modify its origin. Value is a relation between men, even if it implies a specific relation of man to nature. Consequently, the whole discussion about capitalist ground rent can only revolve around a central question: in what way is a fraction of social surplus-value transformed into capitalist ground rent?

In a system where the totality of social value is supposed to be transformed into profit and wages, where commodities are sold around their production prices (production cost plus average profit), it seems that there is no place for a new category that is neither profit nor wages. However, ground rent exists every bit as much as the class of landowners corresponding to it. At first sight, rent can only be a part of profit.

As a part of profit, it is 'differential rent'. In a system based on the private ownership of land, it is natural that certain 'natural factors' – such as soil fertility, waterfalls and water abundance, favourable climatic conditions, and so on – are monopolised. Labour productivity depends not only on factors common to every capitalist organisation of living and dead labour, but also on these natural and monopolisable factors. The system of production prices and average or general profit does not at all exclude the possibility of realising surplus profits. For example, in a particular branch of production, the firm that produces at a lower production cost than the branch average can sell at a higher price than its production price (production cost plus average profit), thus realising a surplus profit. This production at a lesser cost is not generally monopolisable, for nothing prevents other capitals from introducing the same techniques that are responsible for the reduction to costs and the increase in profits. As soon as these techniques are generalised, surplus profit disappears by the same token. Here we are describing nothing other than the mechanism of extra surplus-value.

However, instead of reasoning in terms of value and surplus-value, we are reasoning in terms of production prices and profits. What cannot be monopolised by industrial capital *stricto sensu* can be monopolised by industrial capital in the farming sector. The surplus profit resulting from this monopoly that the industrialist cedes to the landowner is what Marx calls 'differential rent'.

Differential rent presupposes, therefore, the prior transformation of values into production prices. The surplus profit transformed into rent does not come from the natural factor at the origin of the exceptional productivity of labour. Rather, this same factor allows the landowner who monopolises it to appropriate a fraction of the already existing social labour. The natural factor has no price because price is merely a moment of value. Marx writes that the price of the natural factor, like that of the land, is an 'irrational expression concealing a real economic relationship', for 'where there is no value, there is *eo ipso* nothing to be expressed in money'.² The price of the land and the price of natural factors express a balance of forces between capitalists and landowners. The relation between these two groups is not, in itself, a market relation (neither land nor its fertility are commodities), even if this relation, in the world of commodities, can only assume the apparent form of an exchange of market values. In such an exchange, the implicated terms are heterogeneous. This exchange is that of a legal entitlement on the land inherited from history for an entitlement on market (re)production in which the landowner does not participate in any way. This is why we must be cautious when using one of Marx's ideas, developed in the first volume of *Capital*, according to which value and price could potentially carry an absolute contradiction (land has a price without having a value), since the price in question is not that of a commodity.

Since differential rent comes from the difference between the particular and the general production price, it is clear that those agricultural commodities sold at the general production price cannot give rise to differential rent. Those plots of land that do not have any specific advantage would, therefore, yield no rent. However, this is not a sufficient reason for the landowner to relinquish his plot of land to the capitalist farmer for free. Where does the rent of these plots of land come from, then? We could assume that these plots of land do not exist as the private property of someone distinct from the farmer (and that the latter does not, therefore, have to pay any rent). This would solve the problem by abolishing ground rent. For Marx, such an assumption is not a solution, but is rather a way of eluding the problem. We must, therefore, start from the assumption that capitalist farmers must pay rent in order to be able to cultivate a plot of land they do not own. By admitting this, we are admitting, at the same time, that agricultural

2. Marx 1981a, p. 787.

land is monopolised by a particular social class, perfectly capable of opposing the free movement of capital. In this way, the price of agricultural commodities can be maintained at a level higher to that of the general production price of the farmers. This difference will later on assume the form of 'absolute rent'. If the obstacle of property came to disappear, new plots of land would be cultivated so that the momentary surplus profit of the farmers (agricultural profit minus average profit) would also disappear. Absolute rent thus comes from the difference between the market price and the production price, the former being – constantly and not exceptionally – higher than the latter.

Absolute rent does not presuppose the transformation of values into production prices. In Marx, it appears as a category independent of profit, although not independent of surplus-value. Land ownership, which acts as an obstacle against industrial capital, prevents the transformation of total agricultural value into production prices, for it prevents the transformation of total agricultural surplus-value into profit. A part of the surplus-value assumes the form of absolute rent, before the remaining surplus-value and value have been transformed into profit and production prices.

In his discussion of absolute rent, Marx starts from the assumption that the farmer's industrial capital is of a lower organic composition than the social average. This assumption allows him to assert that the price of agricultural products is higher than their production prices, but lower or equal to their values: 'But whether this absolute rent is equal to the whole extra value over and above the price of production, or only to a part of this, agricultural products are always sold at a monopoly price, not because their price stands above their value but rather because it is equal to their value, or is below their value but above their price of production'.³

Absolute rent necessarily comes, therefore, from the fact that the value of the agricultural domain is higher than its production price. This assumption implies the impossibility of absolute rent in those cases where the composition of agricultural capital is higher than the average. Indeed, Marx maintains: 'If the average composition of agricultural capital were the same as that of the average social capital, or even higher than this, the result would be the disappearance of absolute rent in the sense developed above, namely a rent that is different both from differential rent and from rent depending on an actual monopoly price'.⁴

If we assume that the organic composition of agricultural industrial capital is higher than the average organic composition, absolute rent would assume the form of what can be called 'monopoly rent'. This assumption is not particularly

3. Marx 1981a, p. 897.

4. Marx 1981a, p. 899.

'realistic', but it is all the more necessary in logical terms. In this case, the value of agricultural commodities would be lower than their production prices. Would rent be impossible for all that? Whatever the composition of capital might be, the farmers must pay rent in order to be able to cultivate a plot of land they do not own. The opposition of land ownership to the free movement of capital is not contingent on the organic composition of agricultural capital. It is no less alien a force in relation to capital now than it was before. In this case, rent would be equal to the difference between monopoly price and the production price of agricultural commodities, although the latter is higher than agricultural value. It would, therefore, come from the appropriation of a part of social surplus-value by the class of landowners. Theoretically, the land owners can impose this monopoly price and, therefore, can appropriate a part of the social surplus-value because they monopolise the ownership of agricultural land.

In reality, we can imagine a generalised system, as it were, of monopoly prices (like agricultural prices) without violating the conceptual totality of *Capital*. So, let us imagine that the entire industrial capital – whether agricultural or not – sells its commodities at a price higher than the production price (the difference between the two partly corresponding to 'monopoly rent', and partly to absolute rent), that is to say, the whole of capital is in the same situation as agricultural capital. The sum of the values produced would not be equal to the sum of the production prices, but to the sum of market prices. Only the transformed values would be equal to the production prices, whereas the part of surplus-value that has not been transformed would be equal to the difference between market prices (= social value) and production prices. In such a case, the sum of profits and rents would be equal to the sum of surplus-value. Moreover, all the commodities would have to be sold at a price higher than their production price, and often at a price higher than their value.

Let us note in conclusion that monopoly rent, whatever the industrial branch under consideration (agriculture, mines, land development, and so on), does not come from the fact that value in this branch is higher than production prices, but rather from the fact that the monopoly price is higher than the production price – the difference between the two being partly or entirely transformed into rent. To maintain that a part of value, more specifically, a part of the social surplus-value – that part corresponding to the difference between monopoly price and production price – is not transformed into production prices simply means that industrial capital, whatever its branch of activity, acts in such a way that the rates of profit tend to equalise only in the free space (or value) in which rent allows it to operate.

According to our analysis, contrary to the quantity of absolute rent, the quantity of monopoly rent – not being limited by the subtraction 'agricultural value

minus agricultural production price' – is as accidental as interest and interest rates. This is why the organic composition of capital is related to the notions of absolute rent and monopoly:

These two forms of rent are the only normal ones. Apart from this, rent can derive only from a genuine monopoly price, which is determined neither by the price of production of the commodities nor by their value, but rather by the demand of the purchasers and their ability to pay, consideration of which therefore belongs to the theory of competition, where the actual movement of market prices is investigated.⁵

Differential rent differs from absolute rent (and monopoly rent) in that the former does not cause, as the latter does, the price difference from which it derives. The only thing that explains the difference between this particular type of monopoly prices and production prices is the private ownership of land, the legal entitlements inherited from history.

As far as the price of title deeds is concerned, a thousand regularities can be observed, just like in the case of the rate of interest. The price of land rises or falls according to whether the capital invested in that plot of land increases or decreases, the evolution of the rate of interest, the evolution of rent, and so on. However, there is no necessary and internal relation between a title deed and a given quantity of money. Marx writes that this 'expression is as if one were to speak of the ratio of a £5 note to the diameter of the earth'. He goes on to say that 'a complete contradiction holds nothing at all mysterious for them [the practical bearers of these relationships]' who 'in forms of appearance that are estranged from their inner connection and, taken in isolation, are absurd, they feel as much at home as a fish in water'.⁶

5. Marx 1981a, p. 898.

6. Marx 1981a, p. 914.

Chapter Twenty-One

The Trinity Formula

With ground rent, the holy trinity is complete: the Father, the Son, and the Holy Spirit; capital, labour, and land. But that is where the analogy ends, for 'economic science' lacks imagination and rigour – qualities that theology has been proven to possess. God created his Son, the world, his other, in order to realise himself in him, in order to identify himself with him without eliminating the formal difference. This is how, thanks to this mediation, God becomes Spirit. Each 'isolated' moment of the trinity isolates nothing, but reveals its identical nature to the others.¹

Capital-profit, labour-wage... and here is the land, 'inorganic nature as such, *rudis indigestaque moles*² in its primeval wilderness', enabling the completion of the sacred circle: land-rent. The three factors of production and sources of income maintain natural relations, entirely external, eternal and independent from every particular social form. Dialectical theology differs from some 'scientific' approaches in economics, inasmuch as the former is the product of imagination and is founded on solid logical principles, whereas the

1. We are paraphrasing the discussion in Hegel 1995a, p. 76.

2. Marx 1981a, p. 954. These terms are borrowed from Ovid's *Metamorphoses*. Let us add that the eighteenth-century theologian and geologist Thomas Burnet, in his *Telluris theoria sacra*, reproduces a very interesting image showing Jesus standing on a circle composed of seven globes, the first of which represents the 'original earth' caught in chaos and an amorphous state, with the last showing an illuminated earth in a state of perfection. In this way, the geological history of the earth is directly dictated by the strict interpretation of the sacred texts. Gould demonstrates the decisive influence that the Judeo-Christian conception of the dimensions of time (cyclical and linear or 'sagittal') has had on the history of geology; see Gould 1987.

latter formalise the social imaginary at its unrefined state and present the original chaos and illusory representation as a scientific requirement and indisputable truth.

In this trinity, alienation and reification merge and become indistinguishable. Labour's product appears to the worker as an alien force independent of him, a force to which he has to subject himself to obtain the 'price of his labour'. Here is the product of labour – the thing – capable of buying its waged producer. Capital is not a social relation, but a series of things – means of production and money – that, for the sake of linguistic simplification, we call 'capital'. Capital understood in this way, a necessary condition for every social production, demands its legitimate rights (profit) on the social product, which it has contributed to create, just as labour has. Finally, the land is confused with its monopoly, the private ownership of land, a natural precondition of every social production. The natural forces personally come and line up next to capital to demand their rent. For they too, as do capital and labour, contribute to the creation of social wealth.

Marx speaks of fetish and mystification, not because he is dealing with a spiritual reality that he cannot cast in a dubious materialism, but because he is in the presence of an immaterial – spiritual, if we prefer – reality that appears, to the social imagination, as a natural and eternal reality inherent to perceptible things as one of their physical properties. There is nothing material in a social relation (even if it concerns material things), just as there is nothing material in language, which nobody confuses with the organic functions that produce sound. This is why we cannot follow Denis when he claims that 'Hegel calls "objective spirit" a form [capital as subject] of this social reality. Of course, it is because we are dealing with a spiritual reality that Marx feels obliged to speak of mystification and fetishism'.³

Unfortunately, it seems to us that Marx's language is often unnecessarily complex (doubtlessly because he takes too much care not to appear as a non-critical follower of Hegel). This renders the understanding of the real meaning of his theory of fetishism more difficult:

Capital-profit (or better still capital-interest), land-ground-rent, labour-wages, this economic trinity . . . , completes the mystification of the capitalist mode of production, the reification of social relations [metamorphosis of social conditions into things],⁴ and the immediate coalescence of the material relations of production with their historical and social specificity: the bewitched distorted

3. Denis 1984, p. 39.

4. Translator's note: in the 1986 French edition of *Capital*, edited by Maximilien Rubel, from which the author has taken this citation, the passage includes the text in brackets.

and upside-down world haunted by Monsieur le Capital and Madame la Terre, who are at the same time social characters and mere things.⁵

Reification is, therefore, the metamorphosis of material social relations into things. This reification consists in 'the immediate coalescence of the material relations of production with their historical and social specificity'. Translation: the material conditions of production – such as the means of production, land and labour in its physiological determination – are confused with those social relations that are specific to the capitalist mode of production – such as the monopoly of the means of production and land on the one hand, and waged labour on the other. It is, therefore, clear that Marx does not criticise vulgar economics for having presented capital as an 'idea', as a social relation, but rather, on the contrary, for having conceptualised it as a thing.

Vulgar economics breaks up a subject, a living organism, into a series of parts that it calls 'factors of production', 'sources of income', and so forth. Suddenly, it finds itself in front of a fragmented corpse. This does not prevent vulgar economists from presenting the juxtaposed fragments of this corpse as leading a life of their own. But in that case, we are no longer dealing with life, but instead with the imagined life of dead matter and inert realities. Fetishism is both the fragmentation of a subject and its *Auferstehung*. It is the resurrection of dead matter, the 'reification of the relations of production' and the 'personification of things'.⁶

But capital as a subject internalises mystification. It transforms the phantasmagoria described by Marx into one of its own sources of vitality. Ideology, illusion, reification and false appearances are indispensable and essential moments to it. The transformation of the relations of production into things and the personification of things are, as it were, its natural environment. It is the environment in which it can assert itself as a free subject, as an organisation of the time of men eluding their conscious control, as a blind and natural necessity. This is why the attentive reader of *Capital* and the *Grundrisse* will remark that fetishism appears in these works sometimes as pure phantasmagoria and other times as an essential and fundamental moment of social relations and economic reality. Everything depends on the way in which we approach this reality, for fetishism in itself is at the same time pure phantasmagoria and a constitutive part of social reality.

How can this 'splitting in two' of fetishism be grasped more firmly? How can it be both pure phantasmagoria and a constitutive and essential part of social and economic reality?

5. Marx 1981a, pp. 968–9.

6. Marx 1981a, p. 969.

Fetishism, at the level of consciousness, is a negative quality; it is not a *blindmachender Schein*, an emission of beams blinding the various agents. It is, rather, blindness itself, one that does not modify in any way the true nature of capital.

This very quality is positive for capital. It is proper for the capital-relation to be this *blindmachender Schein*, for this generalised blindness is, indeed, the objective environment in which capital asserts itself as a dominant, free and durable social relation. This is why fetishism can sometimes appear in its 'negative' form, and other times in its 'positive' form. It sometimes appears as external to the real social relation (pure phantasmagoria – capital is what it is independently of the false ideas of the agents), and sometimes as an essential determination and a positive quality of the social relation, or capital. Could we possibly be any more specific than this?

Section Three

The Contradictions of the Capitalist Organisation of Time

Chapter Twenty-Two

The Law of the Tendency of the Rate of Profit to Fall

The definition of the law of the falling rate of profit is based on a very simple idea, even if Marx was the first to have formulated it. For a given rate of exploitation, every increase in the social productivity of labour through the increase in the organic composition of capital, results in the reduction of the rate of profit. Since technical progress – or the permanent growth of the value of the means of production operated by the same quantity of labour – is inherent to the capitalist mode of production, the fall in the rate of profit is periodically inevitable.

In Marx, this law is not absolute. The movement of capitalist production does not lead spontaneously to a progressive and irreversible fall in the rate of profit, even if the tendency for it to fall is considered to grow increasingly stronger. Rather, it is the reduction of the rate of profit itself that seems to produce the conditions enabling it to start rising again. It is the law itself that produces the forces that contradict it, hence the curious merging of the categories of 'law' and 'tendency'.

As can be seen from the very title of chapter fifteen of the third volume of *Capital*, 'Entfaltung der inner Widersprüche des Gesetzes' [Development of the Law's Internal Contradictions], this category refers to those laws which contradict themselves without losing, for all that, their status as a law.

The rise in the level of exploitation of labour-power, whatever its cause, constitutes a factor that either slows down or neutralises, for longer or shorter periods, the fall in the rate of profit. Constant capital only

risers faster than variable capital if this allows the businessman to realise a surplus profit or to appropriate an 'extra surplus-value'. Thus, the mechanism of relative surplus-value is activated so that the constitutive times of the working day can be modified in favour of capital.

The rise in labour productivity and the production of relative surplus-value are synonymous for capital: 'For capital, this productivity is not raised simply because more living labour in general is pared than is added in past labour, but only if more of the *paid* part of living labour is spared'.¹ Not every extension or intensification of labour is necessarily followed by an equivalent wage rise, so that the relation surplus labour time/necessary labour time can remain stable. But even in such a case, the ratio c/v would fall. This would happen because with fixed capital remaining the same, variable capital would increase faster than constant capital. This is why the intensity and the length of the working time remain central issues of capitalist production, whatever the rise in labour productivity.

The rise in the productivity of labour in the sectors producing constant capital, periodically leading to the depreciation of the constant capital employed, lowers the organic composition of capital and constitutes an additional factor counteracting the fall in the rate of profit.

The laying off of workers in high productivity sectors, and the social situation in which these redundant workers find themselves, often results in the creation of new industries in which the rate of exploitation is high and living labour predominant.

Foreign trade or unequal exchange can constitute a factor counteracting the fall in the rate of profit. The capitals of the advanced countries active in foreign trade sell their commodities at a higher price than their value or production price, while at the same time they purchase foreign commodities that are cheap because of lower hourly wages. If the world market is the precondition of capitalist development, it is also its product. Marx writes that 'whereas the expansion of foreign trade was the basis of capitalist production in its infancy, it becomes the specific product of the capitalist mode of production as this progresses, through the inner necessity of this mode of production and its need for an ever extended market'.²

The merging of the categories of law and tendency – particularly the law of the tendency of the rate of profit to fall – raises a theoretical problem that deserves some attention. One could challenge Marx's move by asking what is the use of raising to the status of a law that which is simply, in reality, a tendency, itself giving rise to the factors that neutralise it, not to say cancel it out? Is this not an

1. Marx 1981a, p. 371.

2. Marx 1981a, p. 344.

‘unfalsifiable’ law in Popper’s sense? And then, how can the validity of this ‘law’ be empirically verified if it is always possible for it not to manifest itself because of the countervailing tendencies inherent to it?

In order to provide answers to these kinds of questions, let us firstly note that the counteracting tendencies mentioned above appear in Marx’s writings initially as elements explaining the tardiness with which the rate of profit falls.

Secondly, the tendency of the rate of profit to fall and the countervailing tendencies that accompany it do not always act simultaneously in space in such a way as to mutually neutralise one another. In short, the cyclical movement of the economy constitutes the empirical proof of the fall in the rate of profit as much as the countervailing tendencies inherent to it. The reversibility of the tendency of the rate of profit to fall is obviously not the proof of its inexistence or the impossibility to empirically verify it.

In conclusion, the development of the productive forces periodically leads to a saving of labour time that the capitalist mode of production cannot peacefully manage. This saving of labour time is merely a regrettable epiphenomenon for capital, a ‘sub-product’ of the process of valorisation of value and the increase in surplus labour time that are immanent to it. The fall in the rate of profit and the crisis resulting from it stem, therefore, from the conflict between labour time and surplus labour time:

One aspect of this conflict is presented by the periodic crises that arise when one or another section of the working population is made superfluous in its old employment. The barrier to capitalist production is the surplus time of the workers. The absolute spare time that the society gains is immaterial to capitalist production. The development of productivity is only important to it in so far as it increases the surplus labour-time of the working class and does not just reduce the labour-time needed for material production in general; in this way it moves in a contradiction.³

This idea has enabled Marx to deal with capitalist crises in an original way.

The third part of the third volume of *Capital*, entitled ‘The Law of the Tendency to Fall in the Rate of Profit’, contains some very important passages as regards the issue of capitalist crises of overproduction, even if the reader will not find in this section a systematic and organised account of Marx’s ideas on the subject.

In this section, Marx formulates two theses on the issue of crisis, which are proof of the originality of his ideas in relation to the economics of his time:

- (1) Capital does not produce too many means of subsistence in relation to the needs of the existing population. It periodically produces too many

3. Marx 1981a, pp. 372–3.

commodities to be able to sell them at a price that would result in the realisation of a high rate of profit.

- (2) Capital does not produce too many means of production in relation to the number of people capable of working. It produces too many means of production to be able to make them function as capital, that is, as means of exploitation at a given rate of profit.

The originality of these theses consists in the fact that Marx does not oppose the overproduction of capital and commodities to the under-consumption of the population. Since the aim of capital is its own valorisation, it is not paradoxical that overproduction co-exists with the material misery of a given part of the population.

Marx does not devote a particular section or chapter of *Capital* to the question of crisis. This question can be considered one that he did not systematically tackle. At the same time, crisis – particularly as a possibility – is explicitly present throughout the three volumes. In a famous passage, Marx himself specifies and sums up the origin of this possibility:

The conditions for immediate exploitation and for the realization of that exploitation are not identical. Not only are they separate in time and space, they are also separate in theory. The former is restricted only by the society's productive forces, the latter by the proportionality between the different branches of production and by the society's power of consumption.⁴

The possibility for crises to occur stems, therefore, from the intimate articulation between the process of production of capital and the process of circulation, the two being, at the same time, organically linked and dependent on heterogeneous circumstances. Every crisis – periodical or structural – stems from this contradictory unity, from this united and separated couple, when the separation becomes relatively predominant.

Different phenomena are usually grouped together under the heading of 'crisis': the periodical crises linked to the industrial cycle, which are therefore 'normal', necessary and inevitable moments of capitalist production; and the structural crises that are abnormal or extraordinary in that they cannot be overcome by the spontaneous or endogenous mechanisms of the system.

Marx only analysed the former. In Marx, capitalist production has a cyclical character. The stages of speeding up alternate with the stages of slowing down of economic activity. The expansive stage 'prepares' the stagnating stage, and vice versa. However, this cyclical and repetitive temporality is not the only one. Capital develops over the long term in two ways: it reproduces itself from cycle

4. Marx 1981a, p. 352.

to cycle, while at the same time it ages. The periodical crises, in the course of historical time, tend to worsen, so that the productive forces cannot develop infinitely within the narrow framework of capitalist social relations.

The history of capitalism, in particular the history of its crises, means that we cannot settle for the simple pattern proposed by Marx. Each surmounted structural crisis has inaugurated a particular stage in economic history, a resumption of economic activity in a changed economic, social and political environment. Capital in its old age, and in a situation of structural crisis, has survived – historically speaking – and has found a new vitality.

Capitalism does not age, in the last analysis, in a linear and progressive manner, despite the periodical reproduction of capital and the fluctuations of the rate of profit, as Marx assumed it would. Or, in any case, the link between the conceptual totality and historical time, such as it is presented by Marx, must be qualified in light of historical evolution.

This link is itself conceptual and theoretical. We are not attempting to establish a correspondence between the theory of capital and the history of crisis, but rather to examine the conceptual link between the totality-capital and historical time. This problem will be dealt with in chapter 24.

Chapter Twenty-Three

The Periodical Crises

We will begin by examining the crisis as a particular stage of the industrial cycle, before moving on to the long-term tendency of the rate of profit.

23.1 Periodical crises and the industrial cycle

Periodical crises appear as the temporary moments of the industrial or classical cycle during which the rate of profit is low, the agents' expectations are pessimistic, commodities are sold with difficulty, and so on and so forth.

It is enough to examine the causes of the fluctuations of the rate of profit if we are interested in a cursory description of the industrial cycle and crises in Marx. More specifically, we need to explain why the law of the tendency of the rate of profit to fall is not necessarily neutralised in the course of the industrial cycle by the simultaneous effect of the countervailing tendencies inherent in the law.

As we have already noted, in Marx the industrial cycle is linked to the turnover time of fixed capital,¹ but it is important to mention that Marx does not claim to explain the cycle by reference to the turnover time of fixed capital. Moreover, the turnover time of fixed capital refers, in this context, to the effective 'moral' life of this capital, and not to its physiologically possible life

1. See also the following letters between Marx and Engels: Marx to Engels, 2 March 1958; Engels to Marx, 4 March 1958; Marx to Engels, 5 March 1958, all in Marx and Engels 1983, pp. 277–84.

(or to its participation in the average turnover time of capital, such as it appears in the formula of the rate of profit). It refers, therefore, to profitability criteria:

To the same extent as the value and durability of the fixed capital applied develops with the development of the capitalist mode of production, so also does the life of industry and industrial capital in each particular investment develop, extending to several years, say an average of ten years. If the development of fixed capital extends this life, on the one hand, it is cut short on the other by the constant revolutionizing of the means of production, which also increases steadily with the development of the capitalist mode of production. This also leads to changes in the means of production; they constantly have to be replaced, because of their moral depreciation, long before they are physically exhausted.²

In this passage, it is important to note that the 'moral' life of fixed capital depends on profitability criteria (for the development of the means of production and, as we will see, other parameters curtail its duration). A bit further in the same text, Marx goes on to say the following:

The periods for which capital is invested certainly differ greatly, and do not coincide in time. But a crisis is always the starting-point of a large volume of new investment. It is also, therefore, if we consider the society as a whole, more or less a new material basis for the next turnover cycle.³

The crucial point here is that productive investment, in particular the significant investments in fixed capital, is not uniformly distributed over the duration of the ten-year cycle, but, on the contrary, is concentrated in time. Some stages of the cycle are more investment-intensive than others. The mere observation of this regularity is obviously not an explanation of the classical cycle; on the contrary, this regularity is in need of explanation. The question of the industrial cycle is, therefore, the question of the relation between this historical/empirical regularity and the conceptual movement of capital as a process of accumulation.

It is, therefore, logical on Marx's part to look for the explanation of the cycle in the exploitation relation and the conditions of realisation of value:

But if a surplus population of workers is a necessary product of accumulation or of the development of wealth on a capitalist basis, this surplus population also becomes, conversely, the lever of capitalist accumulation, indeed it becomes a condition for the existence of the capitalist mode of production. It forms a disposable industrial reserve army, which belongs to capital just as absolutely as if the latter had bred it at its own cost. Independently of the

2. Marx 1978, p. 264.

3. Ibid.

limits of the actual increase of population, it creates a mass of human material always ready for exploitation by capital in the interests of capital's own changing valorization requirements. . . . The path characteristically described by modern industry, which takes the form of a decennial cycle (interrupted by smaller oscillations) of periods of average activity, production at high pressure, crisis, and stagnation, depends on the constant formation, the greater or less absorption, and the re-formation of the industrial reserve army or surplus population.⁴

In this passage, Marx is proposing, almost explicitly, to start from the antagonism capital/labour in order to grasp the succession of the particular stages of the industrial cycle. If this antagonism is taken as the starting-point, then the sequence of causes and effects – a complex sequence because the effects become in turn causes, and so on and so forth – becomes intelligible. Let us divide the cycle into particular stages following Marx's proposal:

Period of ordinary activity or recovery

Since wages are abnormally low, the relation s/v is high – but why do we assume that wages are low? The answer to this question will emerge at the end of the causal sequence of the description of the crisis. The conditions, therefore, exist for firms to increase their production and their productive investments – circulating capital in particular. The organic composition does not rise, since investment in variable capital is greater than that in constant capital, and investment in fixed capital remains low. These conditions are favourable for the creation of new firms. The progressive reduction of the reserve army of labour has a positive effect on the social demand of means of consumption. The rate of profit of the department producing means of consumption (department II) tends to be higher than that of the department producing means of production (department I), because the recovery, in its initial stage, is not based on intensive investments in fixed capital. The circulation time of those commodities destined to consumption, and with it the weighted turnover time of capital of department II, is reduced. This also contributes to the rise in the rate of profit of this department. Prices in department II tend to rise.

As unemployment is reduced and the balance of forces shifts in favour of the workers, distribution conflicts between the social classes worsen. From this point massive investments in fixed capital start to occur. Distribution conflicts are the

4. Marx 1976a, pp. 784–5.

real drivers of technical change, alongside inter-capitalist competition, although the latter is neither singularly nor primarily the driver of such development.⁵

The increase in productive activity in department II stimulates a similar increase in department I whose rate of profit rises at the same time that unemployment is further reduced.

High pressure production, or boom and prosperity

If we assume that, starting from a given point in the cycle, fixed capital is used at full capacity, then an increase in the level of production entails massive additional investment in fixed capital in both departments. This investment is concentrated in time; the rate at which current production of capital goods increases is necessarily higher than the general increase in social production.⁶ We refer to this as an 'echo effect'. The progressive reduction of unemployment in the two departments stimulates production and ends up triggering a greater rise in the rate of profit and the productive activity of the department producing means of production than in the department producing means of consumption. But it is this feverish activity that undermines the basis of economic growth. If full employment encourages the substitution of living labour by dead labour, on the one hand, it renders solvent demand less elastic, on the other. Distribution conflicts encourage technical change, whereas social demand becomes more and more limited. The rate of profit reaches its limits.

Crisis and depression

The organic composition of capital cannot be perpetually neutralised by a simultaneous rise in the rate of exploitation through the mechanism of relative surplus-value. When solvent social demand has reached its limits, and when it is satisfied in consumption goods, the rise in the relation c/v can no longer be neutralised. This is not because there are no more absolute social needs to be satisfied, or because the relation s/v can no longer increase, but is instead because surplus-value can no longer be realised for want of sales markets. A moment arrives when not only the relation c/v , but also $c/(v + s)$, that is, the relation of constant capital to 'value added', rises. When dead labour increases more rapidly than living labour, at the same time as the rate of surplus-value rises ever higher, overproduction becomes inevitable. What society could transform, under different circumstances, into leisure time appears in the capitalist

5. For more details as to the importance of this discussion, see especially Lipietz 1980.

6. For an arithmetical example (and additional details on this issue), see Mandel 1962, p. 353.

mode of production as a kind of 'arrhythmia'. Already in the *Grundrisse*, Marx writes the following:

On the one hand, the necessary tendency of capital to raise it to the utmost, in order to increase relative *surplus time*. On the other hand, thereby decreases *necessary labour time*, hence the worker's exchange capacity. Further, as we have seen, relative *surplus value* rises much more slowly than the force of production, and moreover this proportion grows ever smaller as the magnitude reached by the productive forces is greater. *But the mass of products grows in a similar proportion* – if not, then new capital would be set free – as well as labour – which did not enter into circulation. But to the same degree as the mass of products grows, so grows the difficulty of realizing the labour time contained in them – because the demands made on consumption rise.⁷

The lack of sales markets where an expected rate of profit can be realised makes itself felt, firstly, in trade, secondly, in the department producing means of consumption, and finally, in that producing means of production.

This temporary gap is a factor that aggravates the periodical crises of overproduction. In the absence of sales markets, those commodities destined to consumption pile up in unsellable stocks. The rhythm of production in department II slows down. Its needs in productive investments are reduced. Overproduction in department II assumes the form of a sectional disproportionality when the reduction of investment in capital goods in department II appears in department I in the form of an overproduction of commodities, and/or in the form of excess productive capacity.

In the course of this stagnating stage of the classical cycle, everything seems to unfold in reverse: fall in productive investment (particularly in fixed capital), slowing down of growth, growth of the 'reserve army of labour', weakening of the relative weight of the working class, downward pressure on wages, extension of the circulation time of commodities, reduction of market prices in order to sell accumulated stocks, intensification of inter-capitalist competition, depreciation of a part of social capital, increased pressure on the intensity of labour and the rate of surplus-value. Crises are the moment at which a very particular sin violently manifests itself; the sin in question being that of having produced not too many use-values, but too many use-values to realise their exchange-value at the expected rate of profit.

As Marx writes, 'Crises are never more than momentary, violent solutions for the existing contradictions, violent eruptions that re-establish the disturbed

7. Marx 1973, p. 422.

balance for the time being'.⁸ These 'contradictions' of which Marx writes are not those of capital, but are capital itself as a specific organisation of time:

Capital, then, posits *necessary labour time* as the barrier to the exchange value of living labour capacity; *surplus labour time* as the barrier to necessary labour time; and [realisable] *surplus value* as the barrier to surplus labour time; while at the same time it drives over and beyond [*wegtreiben*] all these barriers... It therefore drives constantly on one side towards its own devaluation, on the other side towards the obstruction of the productive forces.⁹

In criticising John Stuart Mill, Marx adds that it is stupid to rule out overproduction on the pretext that supply and demand mutually cover each other, since this 'means in other words the same thing as that value is determined by labour time, and hence that *exchange adds nothing to it*, and which forgets only that exchange does have to take place and that this depends (in the final instance) on the *use value*'.¹⁰

Here, we find at the level of capital (and not that of the commodity) the contradiction value/use-value and that of the socially necessary labour time in its dual definition.

We have presented a simplified schema of the unfolding of the industrial cycle that is certainly not exhaustive. Let us note that if we have not emphasised the role of credit and money more generally, it is not because Marx does not consider this factor to be very important. He considers that the terms at which credit is granted play a determining role in the exact and concrete development of the industrial cycle, and leave their mark on the dynamics of accumulation. In the beginning of the crisis, credit is scarce and the rate of interest is quite high, since this moment is the one when productive and commercial firms have the greatest need for credit. It is a moment when only cash payments count. We have not emphasised the role of credit because the terms at which it is granted are variable in time and space. Nonetheless, Marx's analysis of the relation between credit and crisis, valid for a particular historical period, is still relevant, inasmuch as it can contribute to an understanding of the relation between the new terms at which credit is granted and the attenuation of the periodical crises.

Moreover, the disequilibria mentioned above do not necessarily follow the order in which we have presented them. Under certain conditions, an inter-departmental disproportionality, for example, can manifest itself before the overproduction of commodities destined for consumption. It is very interesting for the economic historian to be able to trace the exact origin of each crisis, its

8. Marx 1981a, p. 356.

9. Marx 1981a, pp. 422–3.

10. Marx 1981a, p. 423.

specific particularities, as well as the characteristics of the industrial cycle corresponding to each crisis. It is hardly necessary to note that each of the thirteen crises of overproduction—from 1825 to 1929 (cycle 1929–1937), as well as the more recent crises—have their own specific characteristics.¹¹ Our presentation aims to prove that the countervailing tendencies of the law of the tendency of the rate of profit to fall do not necessarily act so as to neutralise the law and prevent the swings in the rate of profit. If, under certain conditions, this or that factor appears to be at the origin of the reversal of the economic conjuncture, capitalist crises are, without the least exception, crises of overproduction of values, that is to say, both ‘profitability’/‘disproportionality’ crises and ‘overproduction’ crises. This is because these determinations, far from being contradictory and mutually exclusive, are in fact complementary. Of course, it is very important to know whether the 1929 crisis, for example, originally appeared in the form of a crisis of overproduction of commodities, or whether that of 1974 appeared in the form of a crisis of ‘profitability’, before both of them ended up combining the various apparent forms of a crisis of overproduction of values.

The pre-capitalist crises of underproduction have not disappeared since the beginning of the nineteenth-century. Robert Boyer, for the most part drawing on the work of the economic historian Ernest Labrousse as far as we can understand,¹² notes that during the first half of the nineteenth-century – a period of transition from an ‘old-type regulation’ to a ‘competitive regulation’ – pre-capitalist crises of underproduction, caused by bad harvests, for example, far from having disappeared, often coincided with capitalist crises whose social consequences (such as unemployment, fall in purchasing power, and so on) were amplified as a result.¹³

During the post-war period, there was a considerable acceleration of the turnover of fixed capital. Mandel drew attention to this fact in his book *Late Capitalism*.¹⁴ As he noted a lot later, his analysis was confirmed by subsequent publications.¹⁵ The average duration of the industrial cycle – which was eight to nine years for the thirteen cycles from 1825 to 1939 – was greatly reduced. For the post-war period, Mandel speaks of an average duration of four to five years.

Let us note in passing that Marx himself thought not only that the duration of the cycle is variable, but also that this duration would gradually be reduced:

11. For a very brief and concentrated outline of these characteristics, see Mandel 1962, pp. 359–60; Rosier 1987, p. 24 (on crises and cycles of the nineteenth-century only).

12. See Labrousse 1976.

13. Boyer 1979.

14. Mandel 1999, Chapters Six and Seven.

15. Mandel 1982, p. 262. The publication to which he refers is a 1974 study by the Planning Bureau of the Netherlands.

Until now the duration of these cycles has been ten or eleven years, but there is no reason to consider this duration as constant. On the contrary, we ought to conclude, on the basis of the laws of capitalist production as we have just expounded them, that the duration is variable, and that the length of the cycles will gradually diminish.¹⁶

The reduction of the 'moral' life of fixed capital and the acceleration of the periodicity of the industrial cycle are linked to the 'wage relation' of the post-war period. We are especially referring to the coupling of productivity gains and wages, to the minimum wage and to collective bargaining. During the years 1949–1959, productivity growth in France stands at 4.9 percent, and wage growth at 3.9 percent; from 1959 to 1973 they are at 4.8 percent and 4.1 percent, respectively; from 1973 to 1981 they are at 3.4 percent and 2.4 percent, respectively.¹⁷ At the same time, collective bargaining enables economic agents to forecast the evolution of wage levels. In the conditions and the 'rules of the game' of the post-war period, the acceleration of technical change results in particular modalities governing the process of the distribution of value. The downward adjustment of wages being a remote possibility, the evolution of wage levels being more or less predictable, each firm must raise its productivity in order to realise surplus profits. Hence, the shortening of the cycle.

The accelerated 'moral' obsolescence of fixed capital does not originally stem from a more 'intensive' scientific-technical development in comparison to previous stages of capitalist development. The duration of the cycle cannot be explained with reference to this scientific-technical development because, not being independent of the social relation (and 'neutral'), this development is also in need of explanation. Accelerated technical change is the product of the form assumed by the class struggle and by the particular inter-capitalist competition at a specific stage of economic growth.¹⁸

The attenuation of the periodical crises observed since the end of the Second World War, and their transformation into mere recessions, are also linked to the new wage relation mentioned above. Indirect and minimum wage, unemployment compensation, collective bargaining, but also anti-cyclical state-intervention – all these new factors are at the origin of the attenuation of the periodical crises during the growth years of the post-war period. The price of all these novelties was permanent inflation, a structural characteristic of post-war growth.

16. Marx 1976a, p. 786.

17. These data are drawn from Boyer's 'Présentation' in de Montmollin and Pastré 1984, p. 34.

18. It would be interesting to examine the influence of military competition and the arms industry on the turnover time of capital. Did the antagonism between the two blocs entail the acceleration of scientific research and, therefore, the shortening of the 'moral' life of fixed capital?

The attenuation of classical crises and the triumph of Keynesianism during a period of thirty years were at the origin of the excessive optimism of some economists (Paul Samuelson among others) of an international reputation who were all too confident in their econometric models and the efficiency of monetary and fiscal policy. The violent return of periodical crises since 1974 has given the lie to this optimism.

One could say that even economic theory is not spared by the cyclical fluctuations in the rate of profit. Marx's work was undoubtedly a source of endless inspiration for tens of recent studies on the nature of post-war growth and crisis.

23.2 The long-term tendency of the rate of profit

Marx prefers to talk about a tendency of the rate of profit to fall rather than a tendency of the rate of profit to rise because he considers that the long-term tendency would be downward independently of the evolution of the rate of profit from one cycle to another. We are dealing here with the conflict between the 'productive forces' and the capitalist 'relations of production', which is not only periodical and surmountable, but also grows more acute and threatening: 'Capitalist production constantly strives to overcome these immanent barriers, but it overcomes them only by means that set up the barriers afresh and on a more powerful scale'.¹⁹

The barriers within which the maintenance and valorization of the capital-value has necessarily to move – and this in turn depends on the dispossession and impoverishment of the great mass of the producers – therefore come constantly into contradiction with the methods of production that capital must apply to its purpose and which set its course towards an unlimited expansion of production, to production as an end in itself, to an unrestricted development of the social productive powers of labour. The means – the unrestricted development of the forces of social production – comes into persistent conflict with the restricted end, the valorization of the existing capital.²⁰

The reasoning underpinning these 'declarations' is relatively simple. Whatever the periodical fluctuations in the rate of profit, the movement of capital entails an absolute development of the productivity of labour. This finds expression in a rise in the rate of surplus-value. In its turn, this rise has a positive effect on the rate of profit. At the same time, this development entails a relative or absolute reduction in the total labour time necessary for operating a variable quantity of

19. Marx 1981a, p. 358.

20. Marx 1981a, pp. 358–9.

value of constant capital. This reduction has a negative effect on the rate of profit. Whatever the rate of surplus-value, the more the absolute capitalist productive forces develop (technical progress, concentration of capital, and so forth), from one cycle to another, the less living labour is necessary in comparison to the dead labour it operates. In other words, the rise in the relation of dead labour to living labour is potentially unlimited (it has no limit other than continuous scientific-technical development), whereas at the same time capital transforms living labour time into the measure and essence of bourgeois wealth. Hence the long-term tendency – progressive but non-linear – of the rate of profit to fall.

Moreover, the greater the accumulation and the concentration of capital, the more the objective conditions promote working-class organisation, and the more its capacity to resist tends to grow. The class struggle – by imposing structural, institutional and other limits that regulate the exploitation relation – can be at the origin of a crisis that cannot be overcome through the endogenous mechanisms of the system. In the case described above, the fall in the rate of profit appeared more as a result of the extension of the average turnover time (realisation problems), and/or the rise in the relation c/v of the formula of the rate of profit. Now, the primary cause of the worsening of crises is the low level of the relation s/v .

Therefore, we see that whatever the predominant factor lying behind the growing number of difficulties that the valorisation of capital faces, these difficulties stem from the internal logic of capital itself. The endogenous ‘mechanisms’ of the system, the immanent laws of capitalist production, lead to ever deeper and more acute crises. ‘The *true barrier* to capitalist production is *capital itself*’.²¹ In other words, capital as a contradictory and specific articulation of a logical temporality (a system of determinations) and social history grows ever more problematic and fragile.

This strict determinism at the origin of the progressive deepening of crises has very often been misinterpreted. Since crises grow more and more acute, the development of the productive forces (‘progress’) would lead with the same determinism to the transcendence of the current mode of production. One would need only to wait; it would be enough for time to pass. ‘Progress’ would complete what it began.²²

21. Marx 1981a, p. 358.

22. Recall Benjamin’s Thesis XIII on the Philosophy of History: ‘Social Democratic theory, and even more its practice, have been formed by a conception of progress which did not adhere to reality but made dogmatic claims. Progress as pictured in the minds of Social Democrats was, first of all, the progress of mankind itself (and not just advances in men’s ability and knowledge). Secondly, it was something boundless, in keeping with the infinite perfectibility of mankind. Thirdly, progress was regarded as irresistible, something that automatically pursued a straight or spiral course. Each of these predicates is controversial and open to criticism. However, when the chips are down, criticism must

Unfortunately, some careless expressions of Marx's have encouraged these vulgar, not to say ridiculous, interpretations. In the famous chapter entitled 'The Historical Tendency of Capitalist Accumulation' – a sort of conclusion to the first volume of *Capital* – one can find certain phrases capable of disappointing Althusser and irritating Sorel (each for different reasons):

The centralization of the means of production and the socialization of labour reach a point at which they become incompatible with their capitalist integument. This integument is burst asunder. The knell of capitalist private property sounds. The expropriators are expropriated.

The capitalist mode of appropriation, which springs from the capitalist mode of production, produces capitalist private property. This is the first negation of individual private property, as founded on the labour of its proprietor. But capitalist production begets, with the inexorability of a natural process, its own negation. This is the negation of the negation. It does not re-establish private property, but it does indeed establish individual property on the basis of the achievements of the capitalist era; namely co-operation and the possession in common of the land and the means of production produced by labour itself.²³

This passage is at the same time 'Hegelian', 'determinist' and 'humanist'.²⁴ We limit ourselves to the question of 'determinism', which should not, following Sorel, be taken literally.

The negation of the negation is supposed to be inevitable. It is supposed to be a universal law. Here we have Marx unwittingly encouraging vulgar Marxism. History is supposed to follow its natural course. The development of the productive forces is supposed to lead, by its own dynamic, to the kingdom of freedom.

penetrate beyond these predicates and focus on something that they have in common. The concept of the historical progress of mankind cannot be sundered from the concept of its progression through a homogeneous, empty time. A critique of the concept of such a progression must be the basis of any criticism of the concept of progress itself'; Benjamin 1999, p. 252.

23. Marx 1976a, p. 929.

24. As Rubel highlights in the notes to his French edition of Marx's economic writings, the expression 'individual property' can seem surprising. In Marx, individual property designates the moment of the reconciliation between the individual and society, that is, the reconciliation of society and the individual with themselves. Having understood the meaning of this expression, Rubel lets the young Marx comment on the old: 'It is only when the object becomes for man a human object, an extension of his individuality, that man is not lost in the object. This is only possible if this object becomes for him a social object and if he becomes a social being himself. Society must also be embodied in this object for man'; Marx 1963, pp. 1708–9.

The 'laws of history' could not be violated. This is the most false of ideas and the worst poison for the international labour movement.²⁵

However, Marx's careless metaphor is not just a metaphor. Sorel is absolutely right when he writes:

The different terms which Marx uses to describe the preparation for the decisive combat are not to be taken literally as statements of fact about a determined future; it is the description in its entirety which should engage our attention, and taken in this way it is perfectly clear: Marx wishes us to understand that the whole preparation of the proletariat depends solely on the organisation of a stubborn, increasing, and passionate resistance to the present order of things.²⁶

Sorel's merit is to draw attention to the political field. Indeed, if one studies *Capital* attentively, one observes that the conflict between the productive forces and the relations of production is 'steeped' in 'political' relations. Marx shares the excessive optimism of his time, an optimism drowned in the 'icy waters' of Stalinist and fascist barbarism of our time. Marx can only be criticised for this optimism.

Each time Marx speaks of the conflict between the productive forces and the relations of production, he introduces the political factor into the analysis. In the chapter under examination, the main argument is the following: the immanent laws of capitalist production lead to capitalist concentration, which does not spontaneously lead to a reduction of the misery, oppression and exploitation of the working-class. At the same time, the movement of capitalist production gives rise to 'the revolt of the working class, a class constantly increasing in numbers, and trained, united and organized by the very mechanism of the capitalist process of production'.²⁷ This conflict, therefore, which grows ever more acute, entails the terms of its own transcendence, not because of the development of the productive forces, but because this same development is increasingly unbearable for the subject that is supposed to grow stronger and stronger, more and more conscious and organised. Therefore, if we do not share Marx's optimism we must look – with him and beyond him – in the political sphere not for the conditions that would accelerate the development of capital's productive forces, but for those that would stop the development of man's misery, oppression and alienation.

25. 'Nothing has corrupted the German working class so much as the notion that it was moving with the current'; Benjamin 1999, p. 250. On Benjamin, see Bensaïd 1990.

26. Sorel 1941, p. 148. On Sorel, see Portis 1980.

27. Marx 1976a, p. 929.

In the third volume of *Capital*, the same conflict appears as a non-coincidence between society and itself, as a more and more unbearable social alienation.

Capital shows itself more and more to be a social power, with the capitalist as its functionary – a power that no longer stands in any possible kind of relationship to what the work of one particular individual can create, but an alienated social power which has gained an autonomous position and confronts society as a thing, and as the power that the capitalist has through this thing.²⁸

We see, therefore, that Marx himself moderates his optimism. If the working-class is supposed to organise itself into a universal subject, on the one hand, capital appears as an autonomous force based on more and more solid, 'natural' and ideological foundations, on the other. The worker loses every kind of relation with this 'other' – this natural, omnipresent, learned and indisputable authority that dominates and governs him.

How can this alienated society, living in its own shadow, put an end to the vicious circles of alienation, reification and false consciousness? Here is a gap, a black hole: the reader of Marx will not find in the latter's extensive work, both of his youth and his mature years, a somewhat satisfactory answer. It is better to look in Sorel, Trotsky, Luxemburg, Gramsci, and also Lenin – not so much in those organisational forms that are inseparable from the Russian pre-revolutionary reality, but rather in the ideas behind these forms – instead of hurriedly shelving him and wrongly presenting him as the precursor of Stalinism.

Let us return, by way of conclusion, to the question of crises. The endogenous mechanisms of the system (the long-term tendency) lead to ever deeper crises. Here is, one could say, an idea that has pitifully been proven wrong by the facts. The reality is, however, more complex. The examination of the structural crises, the great crises or the long depressions – expressions that are often equivalent but which conceal semantic differences – will allow us to move forward.

28. Marx 1981a, p. 373.

Chapter Twenty-Four

The Structural Crises

Joseph Schumpeter¹ gave the name 'Juglar cycle' (named after the French economist) to the industrial cycle in order to distinguish it from the 'Kondratieff cycle' (named after the Soviet economist). In his book *Commercial crises and their periodical return in France, England and the United States*,² Juglar, essentially on the basis of price fluctuations, provided empirical proof of the existence of industrial cycles. In 1926, Kondratieff published, in German, a 35-page article entitled 'Die langen Wellen der Konjunktur'³ ['The long waves of the conjuncture'], which triggered an international discussion on the hypothesis of long cycles.

Like Juglar, Kondratieff presents statistics on the evolution of prices (see the appendix at the end of this chapter) with the aim of proposing a periodisation of capitalism. According to Kondratieff, the first long cycle – or 'long wave' according to his own expression from 1926 – begins towards 1790 and ends in 1844–51. Stage A of the first cycle, the expansive stage, lasts from 1790 to 1810–17, and stage B, the stagnating stage, from 1810–17 to 1844. The second long cycle, from 1844–51 to 1890–6, is divided into two stages, A and B. The moment of the reversal is situated in 1870–75. Stage A of the third cycle reaches its limits in 1914–20, the moment of the beginning of stage B.

1. Schumpeter 1939.

2. Juglar 1968.

3. Kondratieff 1926, pp. 573–609. This article was translated and published in 1935 in *The Review of Economic Statistics*.

The periodisations proposed by many contemporary economists do not differ (or differ only slightly) from the periodisation based on the movement of prices. However, prices are not a particularly reliable criterion, especially after the Second World War. Mandel has presented statistics based on two new and more interesting criteria: the fluctuations of industrial production and the fluctuations of world trade (see the appendix). Stage B of the third cycle finishes in 1939–45. Stage A of the fourth cycle reaches its limits at the end of the 1960s, the moment at which begins the current structural crisis. Rosier and Dockès, in their book *Economic Rhythms*,⁴ present a descriptive table of the long cycles that we have thought useful to reproduce in the appendix. Moreover, Paul Boccara has assembled statistics concerning the relation fixed capital/output. These statistics aim to show that the organic composition of capital is, in the examined cases, higher during the stagnating waves than during the expansive ones.⁵

However, economists are far from being in agreement on the numbers. Angus Maddison,⁶ for example, questions the existence of a long recession at the end of the nineteenth-century. Boyer,⁷ while highlighting the statistical uncertainties, does not hesitate to compare the great crises of the two *fin de siècle*. Some accounts of the time seem to vindicate those economists who assume a long recession at the end of the nineteenth-century. Engels writes in a footnote in volume III of *Capital*:

As I have already noted elsewhere, the last great general crisis represented a turning-point. The acute form of the periodic process with its former ten-year cycle seems to have given way to a more chronic and drawn-out alternation, affecting the various industrial countries at different times, between a relatively short and weak improvement in trade and a relatively long and indecisive depression.⁸

As Rubel notes, the above lines were written, in all likelihood, in November 1886, when Engels was writing the preface to the English edition of *Capital*. In this preface, among other things, he talks about a ‘permanent and chronic depression.’⁹

Everything that Engels writes in this passage corresponds to a situation of structural crisis. The latter does not eliminate the normal development of the industrial cycle, but it has a negative impact on its expansive and stagnating stages, rendering the former short and weak, and the latter long and pronounced. Statistics exist that show the difference in the length of the periodical crises,

4. Rosier and Dockès 1983.

5. Boccara 1983.

6. Maddison 1981, p. 101.

7. Boyer 1986b, pp. 232–4.

8. Marx 1981a, p. 620.

9. Marx 1976a, p. 113.

according to whether they took place in the context of a long stage of growth or stagnation (see the appendix).

Kondratieff insists that the industrial cycles are more irregular than the long cycles, the duration of the former fluctuating by 57 percent (from seven to eleven years), that of the latter by 25 percent (from forty-eight to sixty years). He also considers that the alternation of long cycles can be explained by the endogenous mechanisms of the system. He writes: 'By asserting the existence of long waves and refusing the idea that they can have accidental causes, we are claiming that long waves originate in causes stretching back to the very nature of the capitalist economy'.¹⁰

Even before Kondratieff's article appeared in German, his ideas triggered certain reactions in the Soviet Union. As early as the beginning of the 1920s, Trotsky, in a letter¹¹ written in Russian in 1923 and entitled 'The curve of capitalist development', expresses his reservations concerning Kondratieff's theory. Trotsky does not question – contrary to what might appear to be the case – Kondratieff's statistics, although he believes that they should be carefully verified. He believes that it is necessary to link the great socio-political events with the long movement of the economy, since the latter cannot be grasped, according to him, without taking into account a series of factors of a non-strictly economic nature.

Some of Trotsky's writings from 1921¹² can be taken as a commentary on this letter. In these writings he mentions a capitalist 'equilibrium', a characteristic trait of growth periods, and its destabilisation that is at the origin of the great crises. This equilibrium is both economic and socio-political, and its disruption is manifested in the upheavals of the economic order, the intensification of national and international conflicts, not to mention revolutions and wars.

Trotsky's prediction was that the new period (that following the First World War) would be characterised by the destabilisation of this equilibrium. According to him, this period would be that of the transfer of world hegemony from one national economy to another, from Great Britain to the United States. He notes that a stage of expansion in the framework of a classical cycle would be possible. He then adds that this would, however, be an expansion within the more general context of a period characterised by growing difficulties that would not take a long time before leading to deep crises. Finally, he predicted a new stage of expansion in '15-20-25' years, in the case that the labour movement would suffer a historical defeat.

10. Kondratieff 1926, p. 599.

11. Translated and published in *Fourth International*, May 1941.

12. Trotsky 1921.

Trotsky's merit is that he does not attempt to transpose the analysis of the classical cycle to the long movements of the economy. On the contrary, he introduces into the analysis a series of political factors. Of course, the economy is a political relation. However, relations of an institutional nature, social compromises, and so on, national and international balances of forces, rules of the game – in short, the characteristics of a long period of relative stability and equilibrium – do not evolve progressively, but rather by leaps and bounds, as soon as the movement of the economy, the abstract movement of accumulation, undermines its own political basis. In periods of structural crisis, it is not only the economic equilibrium that is in crisis, but also the social and geopolitical equilibrium more generally. In Trotsky, no strict determinism ensures the recovery from a structural crisis. The defeat of the working class in the inter-war period is, for Trotsky in 1921, one possibility among many others.

Kondratieff was discharged, arrested and deported by Stalin in 1930, a particular way of sentencing him to death for thought-crimes in a 'democracy of soviets'. His ideas were in contradiction with the orthodoxy of the time, which predicted a 'natural decomposition' of capitalism and explained the long cycle using monetary theories!¹³ As early as 1928, Trotsky was exiled (and later assassinated), not because of his economic ideas, but because of his anti-bureaucratic activities.¹⁴

The discussion of the 1920s between Kondratieff and Trotsky focused on a central question: can the analysis of the industrial cycle be transposed to the long cycle? Is the passage from a long stagnating stage to an expansive one as automatic and predetermined as the change that occurs at the peak of the cycle? These questions are still relevant today. Furthermore, they constitute one of the essential points taken up by contemporary analyses. In order to identify this problem more closely, we must examine the endogenous factors, the forces of resistance and regeneration of capital, such as they appear in structural crises. If we apply the analysis of the classical cycle to the long cycle, we will see whether these factors and forces are sufficient to ensure a new, long and regular period of growth.

Kondratieff and Schumpeter managed to identify the correlation between the different stages of expansion and the technological revolutions that manifest themselves in long spells of innovation. Today, it is widely accepted that the first expansive stage went hand in hand with the massive generalisation of the steam engine (industrial revolution), the second with the development of the rail network (first technological revolution), the third with the use of electricity and oil (second technological revolution), and the fourth with that of electronics, nuclear energy and synthetic chemistry (third technological revolution).

13. See Rosier and Dockès 1983, p. 116.

14. Pierre Broué has published a monumental biography of Trotsky; see Broué 1988.

Thus, the period 1848–73 is characterised by the development of those industries linked to the expansion of the rail network. The steel industry and the mechanical engineering industry act as a locomotive for the rest of the economy.

The two new sources of energy of the 1896–1914 period (electricity and oil), as well as the two new engines connected to them (the electrical engine and the gas engine), generate new dynamic and leading industries: the electrical engineering industry (lighting, telegraph, telephone, radio, cinema, and so forth), the chemical industry (aluminium and its alloys), and the automobile industry.

Post-war growth, finally, goes hand in hand with the expansion of new dynamic and leading industries: the synthetic chemistry industry, the petrochemical industry, the aeronautical industry, the electrical and electronic engineering industry, the electrical goods industry, whereas the automobile industry reaches its peak.

If each stage of accelerated expansion coincides with a technological revolution, it is logical to assume that the long stagnating waves create conditions that encourage research and technological innovation and generate 'basic innovations' as Gerhard Mensch would call them.¹⁵ This author has shown that basic innovations have been more frequent during stagnating stages, more specifically during 1825–35, 1865–95, and 1930–45 (see the appendix). Undoubtedly, the recent years of stagnation are rich in great innovations. We are especially thinking of the applications of electronics and micro-electronics in the industries of discontinued process (robotics) and in the service sector.

We see, therefore, that the great innovations originally appear during the stagnating stages. The expansive stages are characterised by the tendency towards the generalisation of new technical procedures, applied on a small scale during the previous great crises. This generalisation requires favourable socio-economic conditions for productive investment.

These innovations are linked to the social conflicts characteristic of each period. The radical innovations of the first technological revolution are not independent from the shortening of the working day that the British workers managed to win. Let us recall that the twelve-hour day dates back to the beginning of the 1830s, while the ten-hour day dates back to the 1840s. Marx describes some of these innovations in the thirteenth chapter of the first volume of *Capital*.

The existence of strong trade unions, and a well-organised labour movement more generally, has a strong impact on the great crisis of the end of the nineteenth-century. The concentration and centralisation of capital of the time result from this change in the balance of forces. Capital could not remain divided and fragmented against organised and united labour. Sustained scientific research

15. Mensch 1975.

by the monopolies created by the movement towards greater concentration and centralisation of capital results in significant technological innovations. The gas engine, for example, was invented and then developed (around 1880) thanks to the concentrated financial means of a number of oil companies that, as early as 1882, create the giant 'Standard Oil Trust'.¹⁶

The basic innovations preceding the third technological revolution are linked to the conflicts that took place before and during the Second World War:

This particular and terribly bloody (more than 50 million deaths...) form of social struggle (here total struggle against fascism) constituted both a fantastic stimulant for systematically encouraged and planned innovation by the great belligerent states (United States, Germany) – which assumed the major part of the burden of fundamental 'non profitable' research – and a real laboratory for scientific and technical 'progress'.¹⁷

The 'new technologies' recently employed in industry constitute capital's answer to the strong and organised labour movement of the 1960s, which challenged the 'scientific organisation of labour'. Benjamin Coriat describes the various aspects of the crisis of Taylorism (turnover of personnel, absenteeism, sabotage, strikes), and shows their relation to the increasing difficulties encountered by the process of valorisation of capital.¹⁸

The upheavals in the organisation of labour generally trigger disruptions in the productive process, especially during periods of transition, as well as the reaction of workers for whom these upheavals most often mean the deterioration of their working conditions. Thus, the 'scientific organisation of work' was experimented with at the end of the expansive wave of 1896–1914, but was massively introduced during the inter-war period, which was characterised by the weakening of the relative weight of the working class and growing difficulties to profitably employ capital. The technique of successive shifts was applied in many industries, especially in those of continuous process, during the post-war period of growth, but today it tends to become generalised and is accompanied by other forms of flexibility of the working time with the onset of the current structural crisis. The fear of unemployment and impoverishment that is the product of this crisis has become a structural characteristic of the developed capitalist world.

Unemployment in the long economic cycle tends to play a role similar to that of unemployment in the classical cycle. The structural crises characterised by a fall in investment and a rise in unemployment create favourable social conditions for the rate of surplus-value to rise.

16. See Rosier and Dockès 1983.

17. Rosier and Dockès 1983, p. 201.

18. Coriat 1979.

We see, therefore, that during structural crises a series of endogenous mechanisms are activated that promote a new long period of growth: technological progress, more efficient organisation of work, potential increase in the rate of surplus-value, successive depreciations of capital during the cyclical crises occurring during the stagnating stage, concentration of capital, creation of new firms, new commodities and new needs, and so on and so forth.

However, can these mechanisms on their own explain the reversal of the stagnating stage as the analyses following Kondratieff suggest? We do not think so, for two main reasons.

Firstly, this type of analysis underestimates the relative autonomy of the dynamic of institutional change during structural crises, a dynamic not necessarily coherent with the transformation of the productive forces. We have had the opportunity to examine closely the importance that Marx attaches to institutions, through the paradigm of the relation between law and the rate of exploitation. An upheaval in the productive forces, capable of explaining, once the crisis is over, a period of long and (relatively) regular growth, presupposes an adequate modification of the institutional framework, the 'rules of the game' both at the national and international level. However, nothing guarantees *a priori* the coherence between these two kinds of change (in the productive forces and institutions). Change is solely the product, the historical result, of the clash of contradictory projects, of struggles between social classes and nations.

Secondly, this kind of analysis presupposes an almost absolute synchronisation of the economic situation and the class struggle. It censors history by only examining its strictly economic aspects. However, historical reality is unquestionably much more complex and can obviously not be reduced to a series of economic 'regularities'.

The analyses that follow Kondratieff limit themselves to applying the logic which drives the classical cycle to the long cycle. Thus, Boccara, for example, attributes a lot of importance to the fluctuations of unemployment and the weakening of the relative weight of the working-class during the long stagnating stages, which for him constitute the central explanatory factor of the reversal of the economic conjuncture.¹⁹ In order to strengthen this idea Boccara studies demographic developments. According to him, when the mechanisms of the stagnating stage have accomplished their tasks, good economic policies, aiming at overcoming the problems of realisation, would be enough to inaugurate a new long stage of growth. The passage from a stagnating stage to an expansive one is considered to obey a strict determinism.

19. Boccara 1983.

Social conflict cannot be considered a mathematical function of the numerical weight of the working-class according to periodical rises in unemployment and the contraction of employment. How can the German revolution of 1919 and its temporary defeat, the riots, strikes and factory occupations in North Italy in 1921, the experience of the popular fronts in France and Spain, the civil war in Spain, the definitive defeat of the German revolution with the rise of fascism, or the struggles that resulted in the American New Deal, be made to fit into this pattern?

The recovery from the long depression of the inter-war years did not take place in 1933. Of course, that year was, in the United States, the year of the reversal of the 1929–33 crisis of overproduction. However, in 1937, the last year of the recovery in the United States, production had hardly reached its 1929 level, and the recession of 1938 pushed it back to its 1924 level. Therefore, the New Deal is not at the origin of the reversal of the long cycle. Rather, the origin of the reversal of the long cycle can be found in the historical defeat of the international labour movement – and, in particular, the European labour movement (especially the defeat of the German revolution and the temporary triumph of fascism) – and the war that resulted from this defeat. A global redefinition of the balance of forces between the fundamental classes, as well as of the world economic and geopolitical space, was necessary before the ‘Fordist model’ could be successfully generalised in the advanced capitalist world. Applying to the long cycle the mechanisms of the classical cycle obscures a series of historical events that are directly linked to the reversal of the long economic conjuncture.

The recoveries from the structural crises of the nineteenth-century cannot, it seems to us, be deduced from the long term dynamic of accumulation either. More specifically, the former cannot be reduced to the latter. As Mandel notes, the recovery from the structural crisis that began in 1848 was not the pure and spontaneous result of the endogenous mechanisms of the system.²⁰ Through the 1848 revolution, numerous territories in Eastern Europe, the Pacific Ocean and the Near East were suddenly included in the world market.²¹ The division of the world between the imperialist countries, the considerable rise in the volume of exports towards the countries of the ‘periphery’, and the reduction in the prices of raw materials, are at the origin of the new period of growth that began in 1893. Generally, the recovery from each structural crisis does not exclusively obey transhistorical and invariable economic laws. Only the concrete analysis of the particular historical stage of capitalism can provide the explanation for the various recoveries from the various structural crises. This is why there is no law

20. Mandel 1980.

21. Mandel also highlights the role of the discovery of California’s gold mines and their influence on the evolution of prices.

but rather chance behind the relative symmetry of long cycles. This symmetry is the product of chance. This is why the notion of the 'long cycle' is very problematic and must be used with caution.

Boyer's short critique of the analyses that follow Kondratieff sums up the core of the argument:

Since the compromises and the old rules of behaviour do not succeed in ensuring the economic and social coherence of the system, it is struggle, open or latent, offensive and/or defensive, innovative breakthroughs or backward-looking temptations that, by exploiting the particularities of the economic situation, try to impose different 'rules of the game', whether these are original or reactivations of older practices. It is this last criterion that patently differentiates our approach from those following Kondratieff. On the one hand, there is no automatism guaranteeing the passage from a stagnating stage B to an expansive stage A, contrary to what happens at the peak of the industrial cycle. On the other hand, there is no transhistoric law enabling us to predict what the constitutive parts of the eventual régime of accumulation that is in the process of being born will be.²²

Any given conceptual totality somehow appears as atemporal and ahistorical. Quite simply, this means that since the beginning of the nineteenth-century and up until today, we can indifferently use a series of categories that have lost nothing of their functionality: 'value', 'commodity', 'money', 'variable capital', 'exchange relation' – in a single word, 'capital', which is, as it were, the conceptual totality in person. If we set aside other modes of production, capital – as a specific organisation of time and social relation – seems to elude historical time and to be atemporal. However, economic and social conditions have unquestionably changed since the origins of capitalism. Capitalism is not an inert and static reality, but is instead an extremely dynamic system of an unprecedented vitality in social history. How can the Notion of capital resist these changes and remain identical to itself amid such different social environments? Is the use by economists of categories directly drawn from *Capital* abusive?

There is nothing more superficial, of course, than having recourse to such categories as 'quality' and 'quantity' in order to provide answers to these sorts of questions. How can social change, occurring in a context where social relations remain the same, be said to be of a quantitative nature? In reality, we are facing one of the central preoccupations of Hegelian philosophy that can be summed up in the following question: how can a conceptual totality be both a permanent and a completed process? For our purposes, how can capitalist motion be reconciled with the supposed motionlessness of completion?

22. Boyer 1986c, pp. 69–70.

Far from acting in a social environment that it only conquers, capital produces its objective contents that are this environment. It produces its own history. Each particular stage of capitalism, each recovery from a structural crisis, is the peace that capital concludes with itself. This peace allows capital to embark upon a new stage of relatively steady growth.

In actual fact, we are dealing here with a phenomenon that lends itself to an analysis that draws inspiration from the discussion Hegel devotes to the 'Idea', a moment that designates, as we have seen, the unity of 'subjectivity' and 'objectivity'. This correspondence between 'subjectivity' and 'objectivity' is not that of the conceptual totality of capital with an external empirical reality, with a neutral historical time. Rather, it is the relative correspondence of the former with the objective determinations it produces.²³

Inflation, for example, as a structural phenomenon of post-war growth, is a reality that is compatible with the social relation that has generated it. It is even a necessity for the social relation, for it constitutes one of the economic forms, produced by capital, allowing it to embark upon a new stage of regular growth. Similarly, the new modalities and mechanisms of credit, state interventionism, as well as the institutions and practices regulating the wage-relation, have exercised a determining influence on the dynamism of post-war accumulation. The general laws of capitalist production, capital as an organisation of time, are not in any way eliminated by these changes, which are inherent to the 'mode of regulation' currently in operation. On the other hand, central planning is a phenomenon that eliminates the general laws of capital, and are not, in the last analysis, a particular capitalist economic form.

Capital as an 'Idea' is the correspondence of a logical organisation of time – obeying its own immanent criteria – with historical time. This correspondence is a permanent relation of tension and conflict, a relation of sometimes hidden and sometimes evident contradiction. Crises, particularly structural crises, are violent moments of confrontation between antagonistic forces. They open up various possibilities, among which is that of a new 'peace' between the 'subjective side' and the 'objective side' of capital. This is why capitalism is a coherent system of determinations, at the same time completed and open, dynamic and in movement. Peace, of which we have just spoken, is what can eventually be called 'regulation'.²⁴

23. This discussion draws on Fleischmann 1968, Chapter Eleven.

24. This difficulty of thinking about the 'motionlessness' of change appears already in the first analyses of the regulation school. Thus, Michel Aglietta writes: 'Social relations generate history because the antagonisms that they designate are transformed into forms in perpetual becoming. We must therefore avoid using the term "reproduction" both in the sense of something invariant that would be perpetuated as well as in that

One of the merits of the Althusserians is to have sought in Marx's work, particularly in *Capital*, the general laws of capitalist production, for its conceptual structure. However, by censoring the contradictions of the structure, they have ended up with an ahistorical and static vision of capitalism.

One of the merits of the regulation school is to have reintroduced contradiction and, consequently, history into the analysis of the capitalist mode of production. However, by insisting on what changes, it tends to neglect what remains. More specifically, the relation between value/capital and the mode of regulation suffers from a great indeterminacy and is shrouded in an increasing ambiguity, with the reference to Marx becoming increasingly distant. Of course, this is not the case for all regulationists (Lipietz constituting the most striking counter-example). This ambiguity appears in the very definition of the 'mode of regulation' and the 'régime of accumulation'.²⁵

Since we cannot examine here in any length these intermediary notions put forward by the regulationists, we will limit ourselves to a brief and critical remark concerning Boyer's book entitled *Regulation Theory: A Critical Analysis*.

Boyer's critique of Marx is not problematic:

On the one hand, it is unquestionably abusive to identify a strict correspondence between the relations of production and a given stage of the productive forces. On the other hand, the dichotomy between economic structure and juridical and political superstructure obstructs, more than it encourages, a social analysis that emancipates itself from the determination in the last instance by the economy and the state of the material forces.²⁶

This critique seems to us perfectly valid. It is true that some of Marx's formulations point to a mechanical and erroneous vision of social life. Nevertheless, is not his theoretical practice incomparably richer than these clumsy and erroneous formulations suggest? This is what we have attempted to show in this book and we will not repeat the arguments here.

By contrast, it is incomprehensible – for the problematic of the regulationists themselves, moreover – that they say nothing about the Marxist theory of value and, consequently, capital. However, in their very definition of the 'régime of accumulation', there appear the terms 'value' and 'capital';²⁷ in short, even a cursory reading of the book is sufficient for observing that it is full of categories

of an outcome attributable a priori to the movement of social contradictions'; Aglietta 1976, p. vi. Are not 'value' and 'capital' 'invariant' elements of capitalism? Is there not any motionlessness in their movement?

25. Boyer 1986c, pp. 130–5.

26. Boyer 1986c, pp. 42–3.

27. Boyer 1986c, p. 46.

such as 'relation of exploitation', 'value', 'valorisation of capital', 'profit', and so forth. But if one adopts an agnostic attitude towards the question of the law of value, then what is the meaning of this range of categories? Are they referring to 'value added'? What are the laws that quantitatively define profit? Is the 'relation of exploitation' of which the regulationists speak that of national accounting, or rather that identified by Marx? And if the latter is not that as identified by Marx, how can the regulationists explicitly make such a remarkable use of the concept of 'capital'²⁸ such as it appears in Marx? How do they pass from one notion to the other?

Boyer's studies, and those of the regulationists more generally, drawing on Marx's work, have unquestionably contributed much to our understanding of contemporary social and economic life. The whole problematic concerning crises and the periodisation of capitalism, the long-term dynamics, inflation, credit and money, the state and institutional forms, the capitalist forms of competition that vary in time and space, and international economic relations – in short, the inseparable dual régime of accumulation/mode of regulation – enriches contemporary economic thinking.

Unfortunately, the main notions of this school run the risk of floating in a vacuum, to the extent that the reference to Marx becomes more and more timid and distant. An 'intermediary' notion (such as that of regulation) entails the existence of two 'extremes' if it is to be what it is. However, if the law of value and/or the tendency of the rate of profit to fall are avoided, then this extreme must at least be corrected and redefined. It is not enough merely to avoid it.

Paradoxically, behind some of the analyses of the structuralist and the regulationist schools, there is, it seems to us, a common underlying Kantian presupposition. In philosophical terms, this is the dualism between thought and the 'empirical' world, which in economics is reproduced in the form of the dualism between the general laws of capital and capitalist history. However, this dualism does not exist. This assertion requires some clarification.

In the common way of thinking about things, the empirical world is considered to be the place where notions are 'applied'; it is the place of the multitude, as opposed to thought, which is the world of the unity and the Notion. On the one hand, there is the 'empirical world', and on the other, there are the 'categories' – the two merely maintaining between them superficial and entirely external relations. But as Eugène Fleischmann quite rightly asks, what is 'responsible for moving thought and the empirical world apart if not thought itself?'²⁹

28. Boyer 1986c, p. 45.

29. Fleischmann 1964, p. 278.

Hegel writes the following:

The logical reason, if it is regarded as *formal* reason, must essentially be recognizable also in the reason that is concerned with a content; the fact is that no content can be rational except through the rational form. . . . It is only thus that reason *rises* above the finite, conditioned, sensuous . . . and in this negativity is essentially *pregnant with content*, for it is the unity of determinate extremes; as such, however, the *rational* is nothing but the *sylogism*.³⁰

Hegel destroys the dual vision of the world. Universal reason is nothing without the empirical world, without the historical particularity that it uses as form. The latter is nothing without the former either. There is no relation of separation between thought and the empirical world, the intelligible world of notions and the historical world. There is instead mutual fertilisation, contradictory (and dynamic) unity, which is the 'singular' of syllogism as a relative permanence and a relatively durable codification.

Eugène Fleischmann writes the following:

Reason is precisely the expression of the dialectical unity of the world where the universality of thought and the particularity of things are united by the 'singular', which is nothing other than man's free will. . . . To the extent that empirical-historical reality is particular, the conceptual dialectic too appears in more and more differentiated and particularised aspects . . . , which does not prevent it from being the dialectic of the same universal notion, which is reason, the movement of the world in itself and by itself, freely. Logic and history are thus essentially connected, for history provides the Notion with its particularity, whereas the universality of thought, which comes from logic, renders history conscious, free.³¹

Of course, for our part, we are not dealing with such a complex relation (reason/history/freedom), but instead with a simpler although logically similar problem, namely, the relation between abstraction-capital, its particular historical stages and their contradictory unity, which is the temporary compromise that capital concludes with itself.

We have had the opportunity, at several occasions, to criticise the couple of the economic base and the juridico-political superstructure. These notions are overloaded with Marxian simplifications and vulgar interpretations to be of any use. But these two notions lend themselves to less dogmatic interpretations. There is a series of determinations forming a system whose abstract and universal

30. Hegel 1989, pp. 664–5.

31. Fleischmann 1964, p. 279.

'side' is an 'internal end-purpose', a 'blind rationality', an autonomous social relation eluding the conscious control of men. This is the abstract and universal 'side' of value or capital. This internal end-purpose naturally exists only if it is manifested to the 'outside' world; it appears in a phenomenal juridico-political world that is more or less variable and fluid – a world of practices, regularities and habits varying in space and time that is its particularisation. The 'empirical' world of the economy, including its juridico-institutional and political dimension, is not alien to this internal end-purpose that Marx calls 'capital'. It is capital itself. More specifically, it is one of its 'sides', the Notion in its particularised form. Thus, historical change can be approached with capital itself as the starting-point. It is located within capital, within a system of determinations that is necessarily in movement on account of its own contradictions.

The conceptual totality we are dealing with here, as we have already noted, is an organisation of social time obeying its own immanent criteria. These criteria cannot be realised in any 'form' whatsoever, but the 'form' in which they are manifested varies in time and space.

The relatively codified and stabilised relation between the universal and the particular 'sides' of this system – valid during a longer or shorter time period, the peace that capital concludes with the contents that it has produced – is (why not?) what can be called 'regulation'. The latter should, therefore, designate the correspondence of the 'general laws' of capitalism with their specific expression in a given historical moment. Regulation defined in this way would be a truly intermediary notion enabling us to understand the extremes in their relation.

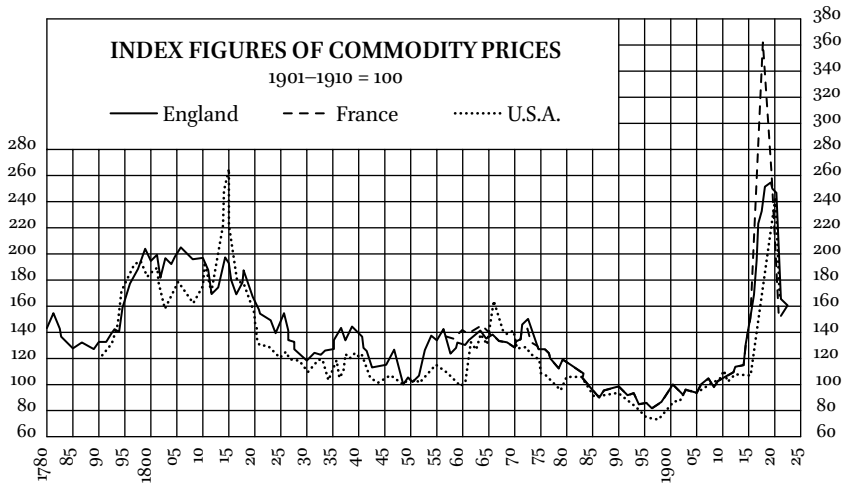
If the economist adopted the Hegelian point of view, he would be very much at ease when examining the relation between the conceptual totality as universality and the particular stages of capitalism. The abstract logical forms of *Capital* would not float disembodied amid ahistorical 'structures'. The particularities of the historical stages would not cast obscure shadows on the logical principles characteristic of an entire mode of production. Between the 'universalism' of the ones and the 'particularism' (tendential at least) of the others, in opposition to the dualism common to both of them, it is possible to give priority to the reciprocal fertilisation of the universal and the particular, to the unity of 'logic' and history.

Hegel writes that 'everything does not appear and pass in time; time itself is this *becoming*, arising, and passing away, it is the *abstraction* which has *being*, the *Cronos* which engenders all and destroys that to which it gives birth'.³² When time is defined in this way, it becomes the Notion, the production of limited and ephemeral realities, their negation and destruction, and the negation of

32. Hegel 1970j, p. 230; Hegel 1970f, p. 49.

this negation.³³ Time is the temporality of these realities and it too becomes atemporal, or, if we prefer, it becomes a process that is not itself in process [*ein Prozess, der selbst prozesslos ist*]. In Marx, capital is an existing relation (subject) that both thinks about the object and discovers itself to be its own object. It is a logical and historical organisation of time. Capital is the logic of history and the concrete history of a logic: the economic time of capitalism.

24.1 Appendix to Chapter 24



Source: Kondratieff 1926, p. 579.

Graph 1. The long movement of prices

33. The negation of the negation does not produce, in Hegel, something 'positive'. The individual or the singular, for example, is the negation of a negation, but is itself an 'infinite negativity'. The Notion (time, the absolute form) is the 'no' – as Marcuse would put it – that sums up reality and determines it. The dialectics of measure lend themselves well to the task of rendering perceptible this situation: measure is 'negated' in the substratum, and the substratum is negated in essence. The latter, however, as we have seen, is an 'immanently negative' notion.

Table 1. Fluctuation of international trade

	Years	Percent
Annual compound rate of growth in world trade (at constant prices)	1820–40	2.7
	1840–70	5.5
	1870–90	2.2
	1891–1913	3.7
	1914–37	0.4
	1938–67	4.8

Source: Mandel 1980, p. 3.

Table 2. Fluctuation of industrial production

	Years	Percent
Annual compound rate of growth of industrial output in Britain	1827–47	3.2
	1848–75	4.55 ^a
	1876–93	1.2
	1894–1913	2.2
	1914–38	2.0
	1939–67	3.0
Annual compound rate of growth of industrial output in Germany (after 1945: FRG)	1850–74	4.5
	1875–92	2.5
	1893–1913	4.3
	1914–35	2.2
	1936–67	3.9
Annual compound rate of growth of industrial output in the United States	1849–1973	5.4
	1874–93	4.9
	1894–1913	5.9
	1914–38	2.0
	1939–67	5.2

^a Mandel notes that this figure is contested; see Van Duijn 1979. Mandel considers that Van Duijn appears to be right.

Source: Mandel 1980, p. 3.

Table 3. Real and annual rate of growth of GDP in percentages for some industrialised countries

	1963–73 average	1974–80 average	1981–89 average
USA	3.9	2.1	2.7
West Germany	4.4	2.2	2.0
France	5.5	2.8	1.9
UK	3.2	2.8	2.6
Italy	5.3	2.8	2.1
Japan	9.9	3.8	4.7

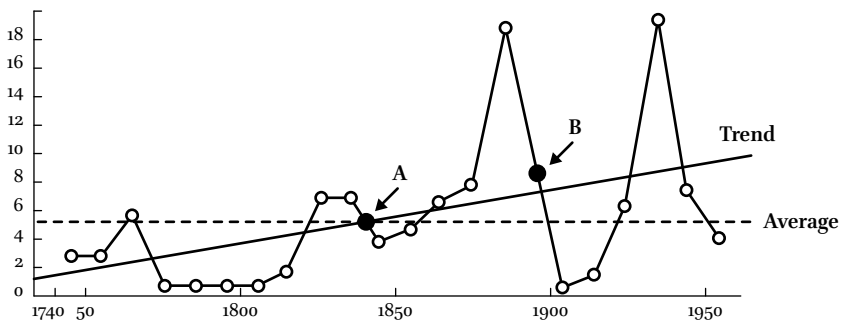
Source: Gélédan 1990, pp. 333–8.

Table 4. Ratio of the number of months of expansion to the number of months of recession

	USA	Britain	Germany
Expansionary Wave 1848–73	1.80	2.71	1.61
Depressive Wave	0.86	0.76	0.79
Expansionary Wave	1.14	1.62	1.33
Depressive Wave	0.67	1.36	1.82

Source: Mandel 1980, p. 29.

The following graph differs slightly from that of Gerhard Mensch. We have removed the point used by Mensch to indicate the year 1840 (cf. our sign A) because the other points indicating decades refer to the years 1745, 1755, 1765, and so on. It also seems to us that Mensch has omitted to indicate the end of the fifteenth decade, the year 1895 (cf. our point B).



Source: Mensch 1975, p. 142.

Graph 2. Frequency of great innovations and prolonged downturns

Table 5. Long cycles and periodisation

	Forms/stages of capitalism	Long cycles concerned
Period I	<i>Competitive capitalism</i> Unintentionally regulated by the market through: <ul style="list-style-type: none"> – the mechanism of the profit rate; – the role played by classic crises; 	Cycle I: 1789/93–1849/50 Cycle II, stage A: 1850–73
Period II	<i>The emergence of monopoly capitalism</i> 1. Creation of giant firms during the ‘Great Depression’ and oligopolistic structuring of the markets, but persistence of market regulation. 2. The long expansion in its ambiguity marks the continuation of industrial concentration and the systematic quest for relative surplus-value. The development of the productive order remains incomplete. 3. During the long depression, <i>the great crisis</i> marks the contradiction between mass production and the increase of the surplus and the stagnation of wages, insufficient effective demand (given the extension of waged labour), market regulation is now obsolete. Industrial concentration intensifies.	Cycle II, stage B 1873–95 Cycle III, stage A 1895–1919 Cycle III, stage B 1919–1939/45
Period III	<i>‘Complete’ monopoly capitalism</i> Subject to monopolistic (Fordism) and state (Keynesian) regulation leads to a period of long and regular expansion at a rhythm never achieved before.	Cycle IV, stage A 1940/45–1968/73
Period IV	<i>The emergence of world monopoly capitalism</i> emerges during the contracting stage of the long cycle with a stage of <i>transnational</i> monopoly capitalism marked by the deregulation of the monopolistic and state regulation.	Cycle IV, stage B 1968/73...

Source: Dockès and Rosier 1983, p. 190.

Conclusion

Capital appears as a completed and open totality, animated from within by a 'soul'. It is an autonomous organisation of temporalities and rhythms, founded on generalised alienation. Social time no longer has any immediate relation to the individual and his real needs. Capital is a living social relation endowed with its own will that organises human life according to its own immanent criteria:

The creation of a large quantity of disposable time apart from necessary labour time for society generally and each of its members (i.e. room for the development of the individuals' full productive forces, hence those of society also), this creation of not-labour time appears in the stage of capital, as of all earlier ones, as not-labour time, free time, for a few. What capital adds is that it increases the surplus labour time of the mass by all means of art and science, because its wealth consists directly in the appropriation of surplus labour time; since value directly its purpose, not use value. It is thus, despite itself, instrumental in creating the means of social disposable time, in order to reduce labour time for the whole society to a diminishing minimum, and thus to free everyone's time for their own development. But its tendency always, on the one side, to create disposable time, on the other, to convert it into surplus labour. If it succeeds too well at the first, then it suffers from surplus production, and then necessary labour is interrupted, because no surplus labour can be realized by capital.¹

1. Marx 1973, p. 708.

This passage, which is more than one hundred and fifty years old, has never been as relevant as it is today. Not in 1858, but in 1988 André Gorz wrote the following lines, quite rightly, in the context of the current crisis:

We live therefore in a social system that knows neither how to distribute, nor how to manage, nor how to employ the liberated time. This is a system that is scared of its growth while it does everything to accelerate it, and which in the end does not find any other destination for it than that of attempting to convert it by any means into cash: i.e. to monetise, to transform into employment, to save in the form of ever more specialised market services, including those hitherto free and autonomous activities that could fill it with meaning.²

Throughout this study we have emphasised Marx's method without explicitly discussing it. This is because method cannot be declared. It can be implemented. Method is not a theory, either in Marx or in Hegel, but is rather the practice of theory, so that the idea of the method results from what preceded it.

The wealth of capitalist societies promises to be an 'immense accumulation of commodities'. The starting-point is this undifferentiated totality whose elementary form is the commodity. Every economist has rightly taken an interest in this form. While some have discovered the triviality of its examples (in particular, the 'red winter wheat n. 2'),³ Marx discovered a whole world. The commodity is not a thing like all others. Rather, 'it is a very strange thing, abounding in metaphysical subtleties and theological niceties'.⁴

First of all, the commodity seems to possess a rather rare quality for a thing, namely, language. Thus, it embarks upon a critical and self-critical dialogue with money. But language in-forms so that this initially amorphous totality develops by way of internal differentiation. The logical categories of capital result from this development. They are organised and constituted into a system progressively. 'Thinking' does not find its categories in 'empirical' reality, the immediate concrete, but often finds in them their name: money, commercial capital, profit, and so on. Is this a case of the self-development of the Notion? Yes, if what is

2. Gorz 1988, p. 21.

3. Gérard Debreu notes that 'the concept of the commodity can now be introduced using some examples. The simplest one is that of an economic good such as wheat; we will examine it in detail. There are many kinds of wheat and to entirely define a particular good one must describe completely the wheat that one is talking about, and specify in particular its quality, for example, red winter wheat n. 2. Moreover, immediately available wheat and wheat that is available in a week's time play entirely different economic roles for the flour mill that needs to use them. Thus, a good at a given date and the same good at a subsequent date are different economic objects and the specification of the date at which the good is available is essential. Finally, wheat available in Minneapolis and wheat available in Chicago also play entirely different roles for the flour mill that needs to use them'. What other details could one demand?

4. Marx 1976a, p. 163.

meant by this is the self-development of capitalist rationality. For the Notion in question is not Marx's thought, but a social rationality of a universal nature. Thought does not create surplus-value, and commercial capital is not born from simple circulation. These determinations already – and simultaneously – exist in economic reality, or, if we prefer, in the 'objective spirit'⁵ that is capital. Theoretical thought does not create the economic world; rather, it creates or discovers the logical determinations of that world. There is no reason to 'deduce' one notion from the other, but it is necessary to articulate these notions according to an order of links and relations. Hegel did not 'deduce' 'Essence' from 'Being' either. 'Essence' was already present in philosophical thought during more than two millennia. Rather, he demonstrated that the order Being-Essence-Notion is neither accidental nor irrelevant, but is in fact logical and necessary.

The value of the commodity is not 'labour' measured in time, but a specific organisation of time obeying its own immanent logic. Moreover, it is on this point that Marx's approach radically differs from all quantifying formalisms. Marx looks in economic reality for its logic, and the latter is not reduced to the limited language of quantity, whether that of yesterday or today. Due to this initial orientation the logic of *Capital* is no less alien to the taxonomic and classificatory constructions of reality. 'Taxonomy' does not eliminate subjective arbitrariness. It is this arbitrariness violently plated onto realities that find themselves, as a result, artificially blocked by the motionlessness of their name.

'Every economy is an economy of time'. This is why the logic of capital is the logic of a specific organisation of time. Starting from labour time, whose form is value, we have seen that the notion of value possesses the sad privilege of criticising the entities it goes through. Simple circulation contradicts itself. Contradiction is an error. Error is a partial truth. Truth is the elimination of error. Thus, value or capital transforms its own contradictions into the driver of its conceptual movement and historical evolution.

Contradiction, or error, is not always of the same nature. For example, the contradiction of the socially necessary labour time is an 'error' of capitalist production, as are crises of overproduction. It is the real contradiction of a non-equilibrium economy that must be asserted as such. The contradiction of simple circulation or commercial capital⁶ is of a different nature. If it is not a pseudo-contradiction, this is because representation is an aspect and a product of capitalist reality. But representation only finds an adequate place in logical presentation if it is identified as such. Simple circulation appears with 'inverted

5. In Hegel, the term 'spirit' [*Geist*] is not a theological notion, but rather the translation of the Greek term 'νοῦς'.

6. We are referring to simple circulation examined separately from the circulation of capital, and to commercial capital as it appears in the first volume of *Capital*.

signs' in the circulation of capital. Not only does capital eliminate and conserve it, but it also remembers its apparent 'positivity', to which it (partly) owes, not its intelligibility, but the intelligibility of the illusory forms inherent to it. Thus, the critique of the forms of representation and logical presentation are not two parallel discourses, but are two dimensions of the same discourse that intersect and intertwine with one another. Therefore, the contradictions that determine historical change, on the one hand, and the conceptual movement of the presentation, on the other, are not of the same nature.

The different stages value goes through do not exist as a sequence in time. Usurious capital historically precedes industrial capital, but also logically follows it, since usurious capital owes its intelligibility to industrial capital. Whether or not production prices historically follow value is of little importance. What is important is that they follow it logically.

This is why the conceptual movement is necessarily cyclical: if capital is a logical construction, and if this logical construction manifests itself in the movement of the elimination of error, then it is natural for it to return to its starting-point, by including in it the stages it has gone through. We mean, quite simply, that the 'value' of the first two volumes of *Capital* is not cancelled by production prices; it had nothing of an initial 'hypothesis'. If, far from destroying itself, it finds a concrete expression in the system of relations of which production prices are a part, this is because it 'recalls' the stages of its movement. Thus, the end, or the completion, is nothing other than this very movement considered while it is immobile.

The initially undifferentiated totality, which is a universality, develops by way of internal differentiations, but the latter are likely to produce new internal differentiations, and so on and so forth. Thus, the unfolding logic in *Capital* is characterised by a remarkable capacity for internalising new knowledge without destroying its internal coherence. There is no error that does not contain in it an element of truth, however insignificant it might be. Obviously, the efficient notions of a non-equilibrium economy, the 'dynamic', 'life', cannot be expressed in mathematical terms, but Marx would welcome the development of mathematical knowledge, and would find a suitable place for it in *Capital* (which is all the more important since mathematics increasingly tends to deal with quality and not only quantity).⁷

Capital is interrupted in the middle of a page and leaves its reader unsatisfied. By saying that it is 'complete', we are simply observing that its categories are sufficiently articulated in order to criticise their critiques, more than a century after Marx's death. But *Capital* is not finished, and this is not by chance. Marx's

7. See, in particular, Guibert 1986.

truth is the isle of Ithaca of a Greek poet,⁸ a true orientation towards truth. Restlessness is permanent and curiosity is never satisfied. As soon as a landmark is identified as such, we are already in the unknown waters of another sea: social classes, the state, the world market.

For Marx, this teleological orientation does not apply merely to the intellectual domain. The dialectical movement of the elimination of error and the growing, progressive (but not linear) access to truth is also a social orientation.

The development of science and technology makes the contradiction between 'disposable time' and 'surplus labour time' more and more acute, and sets an ultimate limit to the capitalist mode of production:

The more this contradiction develops, the more does it become evident that the growth of the forces of production can no longer be bound up with the appropriation of alienated labour, but that the mass of workers must themselves appropriate their own surplus labour . . . For real wealth is the developed productive power of all individuals. The measure of wealth is then not any longer, in any way, labour time, but rather disposable time.⁹

But to whom is it that the above 'become[s] evident'? To reason? To the working-class? To reason embodied by the working-class? To the vague and optimistic consciousness of a naïve era, or rather to a universal subject, bearer of an accumulated messianic force? Or to both at the same time? 'Historical materialism' is decidedly a more difficult enterprise than was expected, and the 'meaning' of history (for as much as it has one) is very uncertain. Whatever opinion we may have about the future of capitalism, we cannot renounce the critique of its present: this would amount to renouncing its interpretation. Perhaps interpretation does not make the world much less uninhabitable. It does, however, make the world more comprehensible, and, in this way, already slightly changes it.

8. Cavafy 2009, p. 36.

9. Marx 1973, p. 708.

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